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1. Educational policies concerning primary education
2. questions and answers
3. States round-up
4. Illustrated material for classroom use.

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Forward Looking Reading Programme

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Teachers, supervisors and administrators need to have perspectives pertaining to the future in a quality reading programme. Reading — the first of the 3 r's - is a basic in the curriculum. Reading skills, well developed, are vital to success in science, social studies, mathematics, health as well as other curriculum areas in the school setting. Few, if any, would argue that success in reading achievement is necessary to secure and maintain a good job or position in society. Which criteria may emphasize a forward looking reading programme? Based on what is presently in reading instruction, what can be done to increase knowledge and skills, as well as attitudes?

A forward looking reading programme will emphasize starting instruction where each student is presently in achievement. Gearing instruction beyond the present achievement level in reading makes for failure on the part of students. Making learning too easy provides for situations involving boredom and a lack of challenge to the learner. With more sophisticated pretexts and improved teacher observation as an evaluation technique, student should begin reading instruction harmonizing with their individual present levels of attainment. By starting with his/her own unique achievement level, each student will make increased progress from on-going reading instruction. Guesswork will be minimized in determining entry levels of students progress in reading.

A forward looking reading programme will stress balance in emphasis upon word recognition

skills. Excesses will be minimized. Deficiencies in emphasis will also be, in degrees, a thing of the past. Each student then will experience teaching of phonics which assists in optimal word recognition skills. Excesses or deficiencies in the teaching of each word recognition skill will be greatly minimized. Rational balance among phonics, syllabication, structure analysis, picture clues, context clues and configuration clues will be in evidence.

Currently, much debate is in evidence pertaining to the degree of emphasis placed upon phonics instruction. In the future, a more accurate assessment will be made as to the amount of emphasis to be placed upon phonics instruction for each learner. Phonics will not be omitted nor will students complete sequential pages in workbooks involving phonetic analysis when proficiency in reading is already in evidence.

Diverse kinds of comprehension skills will be stressed continually in the teaching of reading. Reading to secure facts, directions and order in subject matter will remain salient. However, major stress will be placed on higher levels of cognition such as critical and creative thinking as well as problem solving. Reading for facts will become the building blocks for more complex facets of cognition. Reading to follow directions as a comprehension skill will be followed by critical and creative reading as ordered skills. Improved sequence in acquiring content as a comprehension skill may also be emphasized within a problem solving framework in reading.

In addition to higher cognitive goals being emphasized in the reading curriculum, learners will increasingly read for sheer enjoyment. Thus, an attitudinal objective will also become paramount in reading. Quality attitudes developed within learners will aid these students to become greater consumers of literature.

Improved methods of assisting students to perceive purpose will be in evidence. Purpose indicates a desire to learn and achieve in reading. Preservice and inservice education will stress teachers developing purpose within students in learning to read. With purpose, an increased energy level is available for learning to read as well as to enjoy content acquired. Inductive and deductive procedures may be utilized to encourage purpose to attain word recognition and comprehension skills. Perceiving purpose in learning emphasizes effort put forth to develop knowledge, skills and attitudinal goals.

Basal readers as well as trade books will continually improve in stressing inherent subject matter that is interesting to learners. With interesting content to be read, the reader and the reading curriculum become one and not separate entities. Interest in learning provides for stimulation and motivation. The act of reading will increasingly become its own reward. Reading to

solve purposeful problems as well as for quality sheer pleasure may well emphasize subject matter of interest to students in reading.

Content in reading materials will also become more meaningful. A greater variety of subject matter and materials will make for learners personally relating themselves to the reading curriculum. Facts, concepts and generalizations that are meaningful make sense to the reader. They are understood by the reader.

Sequence in knowledge and skills objectives will become increasingly significant. To achieve any objective, be it general or specific, teachers of reading need to determine a starting point for each student. The starting point needs to pinpoint where each student is presently in reading achievement. This is a first basic or prerequisite in the teaching of reading. Then, a logical or psychological reading curriculum in terms of sequence needs to be developed. In a logically sequenced curriculum, the ordered objectives are predetermined for students to attain in reading. In a psychological procedure, the learner sequences his/her own experiences through self-selection of content in reading. Be it a logical or psychological reading curriculum, the reader needs to perceive order in learning. Only then can success be in evidence in reading achievement.

Procedure in Inservice Education

Reading teachers need to keep abreast of trends in teaching. To evaluate what is presently being emphasized in the teaching of reading to what *should be* is a major objective in the curriculum. From the actual to the ideal must be stressed in the teaching of reading. Which means of growth and achievement in the teaching of reading should be emphasized?

Teachers of reading need to have access to a quality library in the school setting. Diverse periodicals, as well as teacher education textbook, need to be available for reading teachers to

glean content to improve the curriculum. In-service days need to be available for teachers to study literature in the teaching of reading. New ideas acquired from reading need to be appraised in terms of quality criteria. Those ideas meeting up with desired criteria should be tested in actual teaching-learning situations. Hopefully, students will attain a more optimal rate of achievement in reading.

Workshop endeavours should assist in improving the reading curriculum. For the workshop, an agreed upon theme should be in evidence. A large group session for all participants to identify vital problems in the teaching of reading should be in evidence. Committees or small group endeavours should follow. Participants should choose which committee to serve on to solve relevant problems in the teaching of reading. There are also individual concerns and interests in reading instructions. Thus, the reading teacher individually needs to select and attempt to solve problems students experience in reading. Adequate resources, such as reading and audio-visual materials need to be available to participants in the workshop. Consultant assistance should also be in evidence. Each teacher of reading needs to achieve optimally in the workshop.

Faculty meetings with carefully selected objectives might be beneficial to reading teachers. Goals for sequential faculty meetings might include diagnosis and remediation of specific problems experienced by students in reading. Or, assisting students to achieve in a holistic programme of reading instruction. Each faculty meeting devoted to improving the reading curriculum must focus on essential goals of instruction. Trivia and the routine need to be eliminated. Creativity within teachers needs to be released within the framework of faculty meetings to provide a forward looking reading programme for students. Materials and human assistance need to be given to assist teachers to teach reading creatively, utilizing the best procedures possible to stimulate individual optimal progress.

Professional meetings devoted to the teaching of reading might well provide knowledge to reading teachers in assisting goal attainment of students. Be it state or national conventions for teachers of reading, worthwhile sessions should be in the offing. With expenses paid to these convention (s), teachers need to choose general sessions and sectional meetings which improve teaching skills in reading. New ideas are needed by reading teachers to increase student progress in reading.

Independent studies may be made by the teacher on a specific facet of reading instruction. Perhaps, the reading teacher faces a problem with a student having dyslexia. The classroom teacher then studies using a variety of relevant reference sources, means of remedying the identified problem. From the data acquired, the reading teachers tries the new procedure acquired on dyslexia students. Feedback from each student reveals the success of utilizing the new procedures in teaching.

Reading teachers, as further means of inservice education, might engage in conducting research studies. A treatment group receiving the new method of teaching may be contrasted with a control group. Internal validity must be proper and appropriate in the study. Thus, the treatment should make the difference in achievement between the two groups. Considerable knowledge and utilization of statistics are necessary to conduct quality research studies. Growth in research methodology and in the teaching of reading should be an end result.

A planned series of meetings may be held for reading teachers within a school or school system. These meetings should have definite objectives for teacher attainment. The ultimate goal should be to improve the reading curriculum for all students. Each session should have reference materials and consultants available to participants.

In Summary

To develop a forward looking reading programme stresses :

1. starting instruction where each student presently is in achievement.
2. balance in teaching diverse word recognition techniques to students.
3. appropriate emphasis upon each comprehension skill.
4. increased purpose for learners in acquiring content.
5. improved quality of basal textbooks as well as trade books.
6. more meaningful content than formerly.
7. better sequence of content for students to read.

Inservice education is needed continually to upgrade reading skills as well as to develop a forward looking reading programme. These inservice education approaches are :

1. teacher's reading literature from the local school library.
2. workshop procedures with large groups, committee endeavours, and individual study.
3. faculty meetings with specific problems in the teaching of reading to solve.
4. attendance at professional meetings devoted to the teaching of reading.
5. participation in college/university course work to improve the reading curriculum.
6. completion of independent studies pertaining to assisting specific readers to achieve at a higher level.
7. doing of research to solve problems in reading.
8. a planned series of meetings with the end result being to develop a forward looking reading programme.

Inservice Education of School Teachers

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The implementation of the National Policy on Education - 1986 has given rise to great hopes and expectation. However, there always exists a lurking doubt regarding implementation at the school level; within the classroom and outside the classroom. These definitely are not based on dysinformation but on the basis of past experiences in the field of education, particularly school education. If the National Policy of 1968 was implemented in its content and spirit within first five years throughout the country and if we had appropriately equipped laboratories, trained teachers and educational managers with insight and foresight; the pace of development of school education would certainly have been very different. Somehow this has not been the situation; though useful experiences have been gained over the last twenty years.

The Country has more than 7.3 lakh schools now, according to the Fifth All-India Educational Survey which has September '86 as the reference date. The Survey has revealed significant growth not only in the number of schools but also of teachers and, of course, students during the last eight years. There are about 3.7 million teachers in the schools in the country. We certainly need more schools and more teachers and as such, this significant increase in the number of schools and teachers is certainly very encouraging, particularly in the context of our objective of universalization of education. Along with the increase in numbers the roles and functions of teachers have also to change in order to fulfil the expectations from the universalization of education or in more practical

terms from the expansion of education. Steps have to be taken for the upgradation of the professional competence of the teachers, apart from providing other necessary motivational inputs.

Massive Efforts

The present efforts in teacher training in terms of National Policy on Education - 1986 are massive in several ways and certainly take cognisance of the immediate need of teacher orientation, particularly of those who are already in service. The teacher orientation through inservice training is not new. These have been a regular feature of activities conducted by the NCERT, Regional Colleges of Education (RCEs),

State Institutes of Education (SIEs), State Institutes of Science Education (SISE), Language teaching Institutes in the states and other agencies as well. The NCERT had started an ambitious project around 1976-77, correspondence cum contact programme for secondary school teachers. The intention was to enrich teachers of secondary stage in their subject areas and also in the new developments in methodology and equip them adequately to undertake the transaction of the new curriculum; new topics in the text-book and new approaches in teaching learning strategies. Correspondence lessons were prepared by experts and these were sent to 1000 teachers from each state. The response sheets received back from the teachers were corrected by the faculty of the RCE. After six months of 'correspondence', the teachers were invited to contact programmes of a fortnight duration. The response was not very encouraging. After about 2,3 batches, the programme was somehow discontinued. This is only a typical example. There could be a few more as well.

This continuity component of inservice education could become the main drawback. If certain aspects are not looked after in minutest detail, the inservice programmes may get routinised once again. Without going into the weaknesses of the programmes, it may be desirable to consider some aspects which could probably strengthen the training programmes to suit the current needs of the teachers. The trend of programmes normally organised at present for teachers could include mass orientation camps which may create a general awareness among teachers about the need for effecting changes in instructional practices keeping in view the requirements of the school curricula. These may also help to upgrade knowledge of content and familiarise them with the latest developments related to instructional strategies. The other category would be programmes for science, mathematics, work experience, art, education and health and physical education teachers and finally the training programmes for teachers for orienting

them to the procedures and technique of continuous and comprehensive evaluation and different aspects of examination reforms.

School Curriculum

The school curriculum now consists of the topics and areas which few years ago were either absent or were being taken up at the tertiary level of education. This trend is not only desirable but a necessary ingredient in the present day of knowledge explosion. While textual materials at secondary and higher secondary stages are mostly prepared by senior level academicians, drawn mostly from Universities and Colleges; the transaction is to be done by classroom teachers. Majority of these teachers have never had a chance to acquaint themselves with new trends, new curricular areas and developments after having completed their own education and training in pedagogy before joining the profession of teaching. We are well aware that they have little access even to periodicals, journals and any supplementary instructional materials. Majority of our teachers depend totally and completely on the textbooks. The revisions, additions and modifications in textual materials pose genuine problems before school teachers and consequently, the learners suffer. The need for inservice orientation becomes immediate. Well, admittedly such programmes are being planned and implemented by the concerned agencies.

Broadly speaking as already indicated, the inservice teacher education programmes could be classified as those conceived as general enrichment courses and others as specific enrichment courses in specific areas. Based upon the experiences some general observations can be made which could be of interest to those associated with planning and organisation of such programmes :

- The assessment of the felt need of the trainees is often not based upon the felt needs and pragmatic requirements in the actual learning environment. Usually it is only a general assessment which result in planning courses of the type "Six - day

orientation course for Mathematics teachers of secondary stage" The general nature of assessment and approach is obvious.

- Precourse preparation is unfortunately not getting even a small percentage of attention that it really deserves. At this stage, a thoroughly professional approach is called for. There are isolated institutions and organisations which are doing them effectively. It has yet to be adopted by the majority
- The inservice education programmes can certainly not be teaching programmes. These can be interactive, experience sharing exercise with total emphasis on learning instead of teaching.
- The focus of the particular programme should be very clear and specific to the organisers and the faculty members. They must meet several times to have indepth deliberations regarding the content, methodology, approach and the follow up.
- One basic outcome of the inservice programme ought to be the renewal of confidence of the participants in their own inner potential to initiate action when they go back to their institutions.
- Large number of innovations are being undertaken by individuals and voluntary agencies throughout the country in various aspects of school education. While some of these are receiving adequate publicity, most of them are not so fortunate. Not only this, individual teachers are doing things on their own and achieving excellent outcomes which could be highlighted.
- Several training institutions now have facilities in terms of 'educational technology'. There somehow exists reluctance to utilise or mobilise such facilities. This has to be avoided. It is not realised and visualised that the benefit of

modern educational technology should reach the most distant areas and most deprived sections of the society.

- Institutions with adequate faculty strength often involve more persons than necessary. Everyone selects topic/topics of his/her choice and convenience and 'delivers' the same to the trainees. A lecture on Role of Educational Technology may be delivered even without using a chalk and duster.
- The coherence and adherence to the main theme of orientation is often lost. Digression takes place and if not handled with tact, the diversion of discussions to low salaries, lack of facilities, lack of support from heads of institutions and other consumes a lot of time. The specific objective gets a back seat.
- The practice of invited talks, lectures is usually non productive if the guest educator is not briefed adequately. Often it becomes out of tune with the main theme and the participants are just in a fix. There may be instances when the invited lecturers could be totally out of context.
- Inservice orientation with emphasis purely on theoretical framework do not help the trainees much. Demonstrations, participatory exercises, simulated situations encourage greater involvement, response and attention on the part of the participants.

Encouraging Trends

There are sufficient encouraging trends in the field of inservice education of the teachers. The establishment of District Institutes of Education and Training (DIET), Institutes of Advanced Studies in Education, strengthening of Colleges of Education are some of the welcome steps. Emergence of an effective organisational structure for coordinating academic and management activities related to inservice education of teachers at national, state and district levels would really help.

Teacher's Role in Changing Society

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Rapid expansion in the field of education in India has resulted in the establishment of hundreds of higher secondary schools and the enrolment of thousands of students in them. Consequently, the demand for school teachers has sharply increased. In order that the real purpose of education may be fulfilled, the persons recruited in the teaching profession should be well qualified, efficient, trained and highly interested in education.

To determine the quantity and quality of teachers required to meet the needs of modern schools, the author conducted a small piece of research work and tried to investigate into the factors which influence the choice of school teaching as a career among the persons employed in the profession of teaching. The research was conducted according to the normative survey method. Main tools of collecting the data were the questionnaire, literature on the subject, personal visit to schools and interviews with the teachers, heads of the educational institutions, Administrative Officers and other persons interested in the field of education.

Looking to the vastness of the population of teachers at various stages of education, the area of work was limited to the secondary school teachers of the Chattisgarh region in Madhya Pradesh. After the detailed analysis and interpretation of the data, important observations were made which led to the following conclusions.

Most of the teachers do not think of school teaching as their career of life from the early school stage and hence do not purposely plan and prepare for it. They enter it by chance, without any previous thought about it. Nearly three-fourths of these teachers had some other career goals, such as that of Doctor, Engineer, Administrative Officer, etc. but later on had to join the teaching profession.

Among the external or situational factors a great percentage of the teachers is influenced by the family circumstances (the burden of the family and the job necessity). The rest of the teachers are influenced by a number of other factors, including the easiness of the job, monetary gain in the form of tuitions, attraction of a number of holidays and vacation etc.

In the absence of any educational and vocational guidance, the teachers had to depend on the suggestions of either their parents or well-wishers or friends to make a choice of this career.

Among the internal or personal interest factors, nearly one-third of the teachers are influenced by the "liking for the teaching work" and another one-third by the "desire to continue further studies". The remaining teachers are influenced by the number of other factors, including "desire to serve the society through this profession", attracted by the "peaceful working condition of school", "liked the independent life of a teacher", "had a liking to work with children", etc.

As regards the socio-economic background of teachers, it is observed that a majority of the teachers come from the lower middle or middle class families, where economic factors play a predominant role in the choice of a career. The career of teaching having little economic incentive, may have a negative influence on its choice by the teachers.

Regarding the existing conditions in schools, it is observed that the teachers in general are over-burdened with work, including both the teaching as well as other duties, such as office work, library work, hostel work, and the work of extra-curricular and co-curricular activities. The work-load being heavy, they hardly get time to study and increase their knowledge or do any research work in education.

As regards the satisfaction or dissatisfaction of teachers in the profession, nearly half of the teacher population indicates dissatisfaction over the 'meagre salary', 'little time for recreation or paying need to the household responsibilities', 'low standard of life' and 'no saving for any future emergency' in the profession of teaching. However, with all these dissatisfactions of schools, most of them will not leave the job even if offered more money in some other job. This speaks for the teacher's liking for the teaching work. The condition of improved work in school may find greater attraction for teaching profession.

Some Suggestions

On the basis of the above finding, the following suggestions are made for the improvement in the teaching profession.

- The teachers should be mentally and psychologically prepared for the teaching career right from their high school stage. Help may be taken from pamphlets, magazines, film and filmstrips dealing with the teaching career to arouse interest in students for the career of teaching.
- Along with the subject, 'Psychology' already included in the diversified courses of higher secondary schools, a subject like 'Education' containing the elements of the prospective teachers to prepare a background for their future career of teaching be included.
- Guidance and counselling services should be made available in every higher secondary school. So long as the trained career masters and guidance officers are not available some of the teachers on the school staff should be prepared for the work through a short-term course in guidance and counselling.
- Greater educational opportunities be made available to the promising young men and women teachers to prepare them both academically and professionally, for the career of teaching. Special grants and scholarships should be awarded to the students having special interests for the teaching career.
- To ensure a better supply of teachers, an effective system of young men and women to the teaching profession is necessary. For this, I would suggest the formation of an 'Advisory Body for Teacher Recruitment' on a State level. It will be an unofficial body consisting of the representatives from

various school, colleges, training institutions, employment bureau, teachers' associations, parent's body etc. to offer advice, help and guidance in recruiting the teaching personnel to the requirements in the schools.

- The status of the teaching profession should be raised in the public eye. Teachers should be publicly honoured at special occasions and should be given a high place in the society. The exploitation of teacher's services for any sundry activity by the high class executive officers should be stopped.
- The economic status of teachers should be raised to a still higher level, as the present revised scales of their pay and other concessions offered to them are largely nullified by an increase in the cost of living.
- Also, the teachers and their families should be granted free medical aid, free education to their children upto the higher stage, loans for performing the marriage of their

children and travelling concessions to go on study tours and holidays

- Conditions of work in schools should be improved. The work-load of the teachers should be lessened to enable them to devote more time for studies and preparation. The teachers should also be encouraged to conduct research on the burning problems of the day.
- Education should not be dominated by the caprice of whims of the political parties in power, but should be guided by the experts in the fields of education. Lastly, only those who have a genuine liking for teaching, who are well qualified and capable and who have a patriotic bent and will to serve, should be selected and retained in the teaching profession.

The suggestions made above will not only help in greater supply of teachers, but will also ensure a better quality of teachers leading to the improvement in the standards of education in the country.

Developing Language Art Skills

PAULINE BARTON

Courtesy, "Perspectives," 20 4

A common concern of the Division I classroom teacher is a lack of time for covering the entire curriculum. Therefore, a subject such as Social Studies is often given secondary consideration. One way to ensure that Social Studies receives its allotted time is to use Social Studies to develop the language arts skills of reading, writing, speaking and listening. The following are a few examples and suggestions for developing these skills through the Social Studies curriculum.

The first skill, reading, can be improved through the use of non-fiction books dealing with Social Studies topics. There is a wonderful collection of non-fiction books in the market now which are written at an elementary reading level and are geared to areas covered in the curriculum. Teachers can borrow a collection of such books from the library to support the theme they are teaching at the time and have them available in the classroom for student use. It is necessary to have books of varying levels of difficulty. Beginning readers can be encouraged to read the pictures. More advanced readers can be encouraged to read captions under the pictures. Independent readers, of course, can be encouraged to read the whole text. It can be pointed out to children that when it comes to non-fiction books it is not necessary to read the books from cover to cover as one would a fiction book. There is also value in the teacher reading non-fiction books to his students. Not only is non-fiction a valuable tool for developing reading skills, but there are also many fiction

books available which help develop themes and add interest to units taught in elementary Social Studies. Teachers can read some of these fiction books to their students and encourage the students to read others on their own. Students often have relevant books at home which they can bring and share with the class.

The next skill, writing, can be developed through the use of group compositions and individual reports. Group compositions provide excellent opportunities to model how to write sentences, paragraphs and longer compositions. The group writing of compositions also provides the opportunity for the teacher to develop phonics and spelling skills. Group compositions can be created after any class activity, for example, field trips, investigations, films and filmstrips, guest speakers, book reports, and surveys. Once the compositions have been written by the group, the teacher can have them typed on sheets. These sheets can then be used for the teaching of

reading and as a source of at-home reading material. Not only do the beginning readers have more success reading materials which tell about things they have experienced but this also provides an excellent opportunity to introduce vocabulary words from the subject areas into the students' reading vocabulary.

The writing of reports also provides excellent opportunities for the students to develop skills in the area of language arts. Success can also be achieved by doing reports of varying kinds with elementary children. The teacher and the students should do a few reports together each year to model the steps necessary for the preparation of a report. Students can do several smaller reports at home during the year. In most cases the parents find this a pleasant time to work on something of this nature with their child.

The teaching of Social Studies can also be used in several ways to develop the third skill, speaking. The class can be divided into small groups to discuss topics dealt with in the unit. One member of the group can be chosen to record the points made in the smaller group and then to report to the class. As well young children love to do interviews. The class could conduct an interview as a group to model the correct procedure. The importance of preparing questions ahead of time should be stressed. The students can then be given an interview to do at home. For example, a grade two class could do three interviews in a year. They could start by interviewing a grade six student about his or her paper route. This could be done when studying people who work in our

neighbourhood. A list of questions is prepared and each student is assigned a question. A second interview could be done when studying how schools change. Each child could take home a sheet with ten questions to ask one parent. The questions deal with what school was like when the parent was in school. The results are compiled into a composition which is then used as reading material for the students. Later in the year the students could be asked to interview the oldest person they know. The questions deal with what it was like when that person was a child. This interview is done when studying the theme "Things Change".

The last skill, listening, can be developed by using videos, films, film strips, reading to students, inviting in guest speakers, and delivering short lectures. Students should be made responsible for what they listen to, and there should be some form of follow-up and reporting. The skills of speaking and/or writing will be used in the follow-up to these listening activities. For example, after students have viewed a film, the teacher could do a broad review of the film with the class, listing the main points of the film and details worth noting. The teacher could write a report on the film, using the outline developed by the group. The report can then be used as reading material. More able writers can write their own reports of films.

Using this approach will allow the teacher to deal with not only the development of language arts skill, but also the Social Studies curriculum.

Inquiry Training Model of Teaching

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The aim of teaching is to provide learning to the students. The teacher is to inspire the students for it and has to act as guide to impart certain skill, attitude and competence to the students. Teaching is such a noble profession where a good teacher moulds the personalities of many students and thus achieves deeper personal satisfaction. The classroom environment which depends upon classroom activities is very important and can inculcate the proper understanding of the subject concepts among the students.

Thinking can be defined symbolic behaviour which can be employed in two ways to communicate with other people and to talk to ourselves about places, people, things and events either present or not present. This type of behaviour is called thinking. It may be simple description of past events and remote places or may be complex in nature. The simple one is called imaginative thinking. This thinking plays a vital role in classroom teaching and if the predictions, inference of the child are new, original, ingenious and unusual, then it is called creative thinking. If the teachers use their creative thinking in classroom, then teaching learning process takes place at very good pace.

Learning creativity takes place in the process, becoming sensitive or aware of the problems, deficiencies, gap in knowledge, missing elements, searching for solution, making guesses or formulating hypotheses about problems or

deficiencies, testing or retesting hypotheses and modifying and retesting them, perfecting them and finally communicating the results (Torrance, 1974).

A teacher has to use the different methods in classroom to achieve his objectives of teaching. Some educationists have formulated on the basis of their research work some models of teachings which may be used by the teachers in the classroom. Such models have been put forward by some eminent educationists, like Bigge and Hunt (1962), Dececco and Crawford (1977), Joyce and Weil (1980), etc.

A model of teaching according to Joyce and Weil is a plan or pattern of teaching that can be used to shape curricula to design instructional materials and to guide instructions in the classroom and other settings. All these models are based on practice, empirical work and theories of learning etc.

Joyce and Weil (1980) have tried these models experimentally for their effective use. They have analysed these models which have been grouped into four families, viz, information processing, personal, social interaction and behaviour modification. Inquiry training model of teaching was developed by Suchman (1962).

Objectives

The objectives of the study were —

- (i) to compare the inquiry training model with traditional method of teaching science in Class X
- (ii) it's effect on the boy students
- (iii) it's effect on girl students

TABLE 1
Details of Pre-test

N.	Group	mean	S.D.
50	Experimental Group	47	8.2
50	Control Group	48	7.8

TABLE 2
Details of Post-test

N.	Group	mean	S.D.
50	Experimental Group	65	6.33
50	Control Group	50	7.1

TABLE 3
Statistical details of the tests

	Pre-test		Post-test	
	Experimental Group	Control Group	Experimental Group	Control Group
(i) S.E.m	1.15	1.10	0.89	1.004
(ii) 6 D	1.65		1.34	
(iii) C.R.	0.6		11.1	

TABLE 4
Statistical Details of Post-test

	Boys	Girls
1. N.	30	20
2. Mean	61	69
3. S.D.	6.5	6.0
4. S.E.m	1.18	1.34
5.	1.78	
6. C.R.	4.49	

TABLE 5
Details of errors committed by Control Group

C.I.	Pre-test	Post-test
40 — 49	5	2
30 — 39	12	12
20 — 29	20	6
10 — 19	5	20
0 — 9	8	10

Hypothesis : There is no significant effect of the treatment on the achievement of girl students

Sample : 100 students of Kendriya Vidyalaya I.I.T. Kanpur

Design : The present study was experimental in nature. In this study pre-test, post-test control group, experimental group design was used. Two tools— criterion test self prepared (pre-test) and criterion type test self prepared (post-test) were used. The sample was divided in two groups by using the scores of pretest. One group which was taught by traditional method was named as control group and the group which was taught with inquiry training model was named as experimental group. The study was continued for $1\frac{1}{2}$ month.

TABLE 6
Details of errors committed by Experimental Group

C.I.	Pre-test	Post-test
40 — 49	5	—
30 — 39	15	—
20 — 29	18	7
10 — 19	7	40
0 — 9	5	3

The inquiry training model was found to be significantly superior to traditional method when the groups were matched initially for mean and S.D. Inquiry training begins by presenting students a problem and giving them opportunity to verify facts involved in the puzzling situation. The verified facts are tested by asking experimentation question i.e. by introducing a new variable or changing the existing one to find if the altered situation would lead to the same effect. Thus students find the cause for occurrence of the problem by putting several factors, solutions together and testing these solutions they arrive at conclusion and the students can apply these solutions in different situations. One objective of this model is to make students conscious of

and learn to analyse their thinking strategies. This model develops scientific process skills and the creative thinking abilities of the students. The inquiry training model is a key of teaching thinking. In this the students become active learner. This model has got immense importance in science teaching in Kendriya Vidyalayas where the important concepts are generally missed by students in classroom teaching

During the study the problems based on the important concepts were posed to the students and they were given opportunity to arrive on the solution of this problem by trying out different facts related with the problem and thus knowledge, understanding achieved by the students was of permanent nature. The value of C.R. is 11.1, which proves the effectiveness and validity of this method over traditional method. Further in the post-test the mistakes committed by the students have gone down by large extent as evident in Table 6. As also in evidence from Table 4 value of C.R. is 4.49, which is indicative of the fact that there is a significant difference of means of girls and boys and the method is more effective in the case of girl students.

An Apology for Pronunciation

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There is a tendency among the educated Indians and even among the English language experts of India to consider good English accent as a linguistic luxury and according to them, the time spent by people to acquire a considerable knowledge of English phonetics is a sheer waste. But, in fact a sound knowledge of phonetics helps people to get the answers for some of the grammatical puzzles, to understand the chaotic character of spelling and pronunciation and to enjoy jokes connected with pronunciation. Hence, teachers who teach English or through English will find it a very rewarding experience to attempt a considerable mastery over English pronunciation. Moreover language is primarily spoken and so it has to be spoken well.

But what makes pronunciation a big problem in English? It is the frequent lack of correlation between spelling and pronunciation. In his own characteristic way George Bernard Shaw proved that 'Ghoti' (a meaningless word coined by him) has to be pronounced 'fish'. He explained that 'gh' cluster in words like 'through', 'rough', 'tough' etc has the phonemic value of /f/ and 'o' in "women" has the value of /i/ and 'ti' cluster in words like 'ration', 'station', 'nation' etc. has /δ/ value. Thus he proved that 'ghoti' should be pronounced 'fish'. Such a 'logical' argument of Shaw should only be an eye opener and should not be stretched too far.

Why should all learners try to learn a particular standard pronunciation? The reason is simply this. The different dialects of English have different

pronunciations. Therefore, there has to be a standard pronunciation. Otherwise pronunciation itself can lead to misunderstanding and this is illustrated with an example. The example is only a humorous imaginary anecdote.

An Australian, smitten by the marvellous beauty of a building, was gazing at it from the middle of a road. 'Hey! fellow you have come all the way from Australia only to die?' said an English constable. 'No sir!' replied the Australian, "I came yesterday" (jestoðdai). Today is pronounced 'todie' (tudai) in Australia and hence his reply. Such jokes amply exemplify the fact that mispronunciation can lead to misunderstanding. Knowledge of English pronunciation helps people to enjoy such jokes and develop a good sense of humour.

Even the slightest acquaintance with the phonetic symbols helps learners to give up the deep rooted notion about a.e.i.o u. These are not vowels in English. They are only letters which usually represent the vowel sounds in writing. So the learner understands that a 'university', 'a European', 'a useful tree' etc. are justified because the initial sound in all such words is /j/ which is a semi-vowel and it is classified as a consonant in English phonology. Similarly 'one' is transcribed /wʌn/ and /w/ is also a semi-vowel consonant and so if 'one' takes an indefinite article 'it' takes the article 'a' and not 'an' and if it takes the definite article 'the', it is normally pronounced /ðð/ and not /ð/ as before vowels. 'Everyman's English Pronouncing Dictionary' by Daniel Jones records the pronunciation of hour, honest without the initial /h/ and so 'He worked for an hour; 'He is an honest gentleman' are acceptable because the initial sounds in 'hour' and 'honest' are a diphthong and a vowel respectively.

The tag question attached to a sentence like "I am a teacher, aren't I?" looks highly anomalous. The split form of the tag question to the same sentence, 'am I not?' looks very formal and does not fit into the informal conversational context of the tag question. Why is "amn't I?" unacceptable or improper? The answer to this grammatical enigma is in phonetics. The sounds (phonemes) /m/ and /n/ are nasal sounds and it is highly difficult to produce these sounds in quick succession without a deliberate effort and without rendering the result clumsy (Incidentally that seems to be the reason why /n/ is silent in words like column, solemn, condemn. The same /n/ is pronounced in solemnity or solemnize and condemnation because it moves to the next syllable). Hence, the tag question 'aren't I?' in the above illustration. Thus phonetics solves some of the grammatical puzzles.

Learners sometimes wonder why there should be two pronunciations for some words like situation, education. Phonetics has the answer

for it. Phonemic clusters /tj/ and /dj/ become /tð/ and /dʒ/ respectively. That is why in connected speech 'cann't you do it?' and 'would you do it?' are uttered respectively

/ka.nɪðu du'it?/ and	/wʊdʒu du'it?/
This explains /sɪtju'eɪðn/	/sɪðu' eɪðn/ and
/eɪdʒu 'keɪðn/	/edʒukeɪðn/

Incidentally 'Madurai' also spelt Madura, a city in Tamilnadu was pronounced by the Britishers /'maedʒʊrə/ and /'maedʒʊrə/

'Memoir' and 'reservoir' are pronounced /memwa:/ and /rezəvwa:/ on the same analogy as they are pronounced in French. These discoveries are the rewards for the enormous effort one makes to understand English pronunciation

Non-native speakers of English who use poetry as a medium to express their views should possess a sound knowledge of pronunciation because sound plays a major role in poetry. One of the aspects of poetry is rhyme and rhyme in short is sound. Those who are adept in referring to 'Everyman's Pronouncing Dictionary' by Daniel Jones discover that 'awry' does not rhyme with 'lorry' and 'sorry'. But it does rhyme with 'cry' and 'try'. Such examples are many in English.

Mispronunciation in announcements regarding missing persons can cause mirth. The word 'aged' can be pronounced in two different ways in two different contexts.

/eɪdʒd/-referring to age.

/eɪdʒɪd/—elderly.

If the announcer pronounces the word in the second way in a sentence like 'A boy aged six is missing for the past one week' the announcement may sound ridiculous to a person who possesses a sound knowledge of pronunciation.

Some of the disyllabic words in English act as both verb and noun. How can a listener make out whether it is a verb or a noun or how can a speaker bring out through his pronunciation the

difference in their grammatical function? Verbs have their stress on the second syllable.

Eg. 'Present — n and adj - Pre'sent - Verb

There are some words which are spelt differently but pronounced alike

Eg. Sweet, suite — /swi:t/

In the same way a word is pronounced in two different ways in different contexts.

buffet — /bʊfeɪ/ /bʌˈfiːt/

bow — /bau/ /bəʊ/

Moreover it is interesting to note that majority of the non-native speakers mispronounce some of the words commonly used in our conversation.

Vehicle	— /vɪːkl/	impious	— /ɪmˈpiəs/
Thames	— /tɛmz/	Thomas	— /tɒməs/
Hero	— hɪərə/	heroine	— hɪərəˈwiːn/
Comedian	— /kəˈmiːdiən/	bruises	— bruːzɪz/
Constable	— kənˈstəbəl/	target	— /tɑːɡɪt/
Tour	— /tuə/	Competitive	— kəmˈpetɪtɪv/

Sunday, Monday etc. are pronounced /di/ and not/ dei/

Sunday — /Sʌndi/Monday/Mʌndi/

If after 10 or 13 years of learning English if one is not able to understand the above words when they are uttered by the native speakers, it is a clear case of 'learners labours lost'.

In the 'paper and pencil tests' of modern age there is no recognition for good pronunciation. Speech is the exclusive characteristic of the human beings and it is a God-given talent not given to any other creation of His. But it is woefully neglected in the modern evaluation system. Hence, the enormous amount of time spent by a non-native speaker to achieve tolerably good accent is considered a sacrifice. Yet phonetics helps teachers to satisfy to some extent the curiosity of the students to find explanations for the anomalies in English language. Hence knowledge of phonetics is not a linguistic luxury. But in the present circumstances the phonological aspect of English calls for a lot of sacrifice, yet the enlightenment a learner gets and the discoveries he makes in the language are undoubtedly amply rewarding experiences

Effect of Noise on Mental Efficiency

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Psychologists and educationists have concluded that noise pollution, besides intelligence and motivation affects the process of learning. Environmental noise is one of the major factors which is related to learning ability of an individual. The concept of noise pollution has gained prominence in the developing countries of the world. It has also been established by various researches that noise pollution causes deafness and other physical deformities among those who are continuously exposed to noise. Noise pollution also interferes with the work performance in the offices and factories. The noise pollution also affects the mental efficiency of school-going children as the schools are generally situated in a thickly populated area exposed to noise of vehicles, loud speakers, record-players and radios etc.

'Noise' is any sound which is physiologically arousing and stressful. Smith defines 'noise' as 'unpleasant sound'. Noise can be measured in decibels which has been named after Alexander Graham Bell. The pain threshold is 120 decibels and the decibel scale is logarithmic. Hence a noise level of 90 decibels has ten times the sound energy of 80 decibels and a tenth of 100 decibels. It is evident that a small change in numbers around the recommended limit of 90 decibels means a big change in sound levels. Drills produce 120 decibels and a running motorcycle produces 180 decibels of noise.

The mental performance and the human behaviour are influenced by the noise of the surrounding environment. Our workers working in the factories are daily exposed to continuous

noise of the running machines. People living near airport and railway line or station are exposed to noise almost every time. The modern means of communication and travelling have created the problem of noise pollution.

Immediate attention to control noise pollution is needed by the developing countries of the world. In a survey conducted by All India Institute of Medical Sciences (AIIMS), New Delhi, it has been found that average noise level in the Indian metropolitan cities is more than twice, the internationally accepted limits. In Bombay, Calcutta and Delhi, the noise level has been observed to be 95 decibels, which is quite sufficient to make a man deaf, if exposed to this noise for a certain period of time. A noise level of 75 decibels during the day, is believed to interfere

with the process of teaching learning of the educational institutions. Noise pollution causes health problems, affects the nervous system, normal sleep pattern, malformation in fetus, high blood pressure and also causes cardiovascular diseases and vulnerability to infection

The findings of Anti-Noise Pollution Committee have revealed that the people of Bombay live more in danger from the noise of loud-speakers than the noise of aircrafts. The aircraft noise is short timed and this exists not more than two minutes at a time, but the noise of loudspeaker goes on for many days continuously.

The effect of noise is perceived by different people in different ways. Some people can work or study with the Radio going on and some people cannot study at all, if there is any noise of any kind. This depends upon the hypersensitivity of the individuals exposed to noise. The noise level in the major cities of India like Bombay, Calcutta and Delhi is 95 decibels, which is the highest in the world. The noise level in the major cities of the world like London, New York and Paris is 45 decibels. Constant exposure to noise causes hearing problem which is a social stigma. Noise not only causes physical harm but it also affects the efficiency level of the people doing mental jobs.

Problem Defined

'A study of the effects of noise on the mental efficiency of high school students' in Haryana. Mental efficiency in this study has been assessed from —

- (1) the total number of letters correctly decoded.
- (2) the total number of errors made by the students in the decoding process. Students of IX class of Model School, Rohtak have been taken for this study.

Objectives

- (1) To study the effect of noise on the mental efficiency of the high school students.

- (2) To find out whether the noise sensitivity of the students influences the effect of noise on the mental efficiency.
- (3) To study about the mistakes committed by the students while performing their mental task in noisy environment.
- (4) To study the mistakes committed by the students of high and medium noise sensitivity groups and students of low sensitivity group

Hypothesis

- (1) Total mental work output would be significantly decreased in noisy environment.
- (2) The effect of noise on total mental work output shall be more in high and medium noise sensitivity groups as compared to low noise sensitivity group.
- (3) Students shall make more mistakes while performing their mental task in noisy environment.
- (4) While performing mental task in noisy environment students of high and medium noise sensitivity groups shall make more mistakes, than the students of low noise sensitivity group.

The study has been delimited in sample and in the use of tools. The study has been conducted on 60 students of IX class of Model School, Rohtak for a period of one month only. Bazar noise recorded on an audio-cassette.

Intensity of Noise : 110 decibels.

Mental Task : Decoding of letters.

Duration of Task : 20 minutes.

Tests of Mental Efficiency

After administering the Indian adaptation of Weinstein's noise sensitivity scale (Bhatia et al. 1988) in order to estimate the noise sensitivity level of each student, the students were grouped as —

- (1) Low noise sensitivity group.
- (2) Medium noise sensitivity group and
- (3) High noise sensitivity group.

Twenty students were randomly selected from each of the noise sensitivity groups 1,2 and 3 and were randomly assigned the following groups :

Group	Noise Sensitivity	Number of Students
A	Low	10
D	Low	10
B	Medium	10
E	Medium	10
C	High	10
F	High	10

Groups A,B and C constituted the controlled groups and groups D,E,F constituted the experimental group. The controlled groups performed the decoding task of mental efficiency in quiet conditions, while the experimental group performed the coding task under exposure to noise of 110 decibels.

Main Findings

After analysing and interpreting the data, it was concluded that the students of medium and high noise sensitivity groups showed significantly

less mental output score under noisy conditions than the controlled ones. Therefore, the first hypothesis was proved to be partly true

The second hypothesis was also found to be partly true because as compared to low noise sensitivity group, only high noise sensitivity group has significantly less total mental output scores. The third hypothesis was retained because all the students performing the mental work under noisy conditions made more errors than the controlled groups. The fourth hypothesis rejects because the comparison of the mean error score of groups D,E and F by analysis of variance showed no difference among the three groups.

It is concluded from this study that under the effect of noise, the total mental work output of students with medium and high noise sensitivity is decreased significantly. On the other hand, irrespective of the noise sensitivity all the students make more mistakes while working under environmental noise than in quiet conditions. The classrooms and the houses are to be protected from noise for the proper study of the students, otherwise exposure to internal as well as external noise may seriously affect the academic performances of the students. The teachers have to play a vital role in fighting against the noise pollution at all levels.

Components of Computer Education

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Introduction of computers in Indian schools is of recent origin. Realizing that the world of tomorrow which would usher in an information-rich and technology intensive society, calls for new approaches to learning, the Government of India formulated an ambitious project, Computer Literacy and Studies in Schools (CLASS) in the year 1983 under which nearly 1250 schools in the country have been provided 3000 BBC Accorn computers covering 1,35,000 students. Later, the project was expanded and it is hoped that nearly 65,000 computers will be distributed in schools to promote awareness, literacy and studies and to pave way for large scale computer applications in society.

A realistic assessment of the CLASS programme reveals that besides lack of awareness, will and involvement, deficiencies concerned— (a) lack of well-defined curricula for different grades ; (b) lack of assessment of students to instil seriousness ; (c) poor maintenance of hardware ; (d) lack of adequate finances to procure hardware and software ; (e) inadequate laboratories for computer practicals ; (f) unavailability of locally developed software in regional languages ; (g) lack of training facilities for teachers ; and (h) frequent transfer of trained staff, Gupta (1989). Experts feel that unless effective delivery systems for computer awareness and education are evolved with a view to covering all students, the country may not be able to take the much talked about 'quantum leap' into technological era.

Even though field evaluation of CLASS programme has been made on selective basis, the fact remains that little attempt has been made to derive feedback from the field on the basis of empirical studies with a view to studying different issues related to computer education at the school level. Among some of these issues on which little information is available, mention can be made of the level of satisfaction of students, attitudes of parents towards computer education, attitudes towards teachers and facilities, identification of difficulties experienced by the students etc. Further, we are not sure whether both boys and girls are equally interested in the subject and how can the instructions in computer education be ideally provided and from which grade level.

Seen in the above perspective, the present study assumes considerable importance since it happens to be one of the first field studies at the school level in India pertaining to some of the above aspects.

The present study was taken with a view to :

- Studying the comparative attitudes and levels of satisfaction of boys and girls studying in grades six through grade 9 towards (i) computer education ; (ii) practices followed for providing instructions in computer education and ; (iii) computer instructors.
- Ascertaining whether the attitudes of the parents towards computer education (as perceived by the children) are favourable.
- Evaluating whether school children studying in grades six through nine in the school are interested in computer education.
- Identifying areas of deficiency with regards to computer education for planning subsequent improvements.

Five hundred students (boys and girls) studying in from class VI to IXth were selected randomly from the school wing (Model Academy) of the MIER Jammu. (Model Academy established in 1936 is a well reputed educational institution in Jammu city upto 10+2 level having its own computer centre). The average age of the students was 14 years 9 months. Due to incomplete data, the final sample comprised of 487 students (Boys 296, Girls 191). A salient feature of the school is that computer education has been made compulsory for all students as a part of their daily curriculum for the last $1\frac{1}{2}$ years. The school does not, however, fall under the category of schools under project 'CLASS'. Further, no evaluations of the computer programme in the school has been taken in hand.

A attitude scale was used to assess student's attitude towards computer education. This attitude

scale consisted 33 items which were further divided into seven areas namely; attitude of students ; parental attitudes, satisfaction of students, interest of students, attitudes towards practices, attitudes towards teachers and suggestions for improvement respectively. Each item had three response categories (Yes, No, Doubtful).

The attitude scale was administered to the sample and their responses were scored. Weightages of 3,2,1 were assigned to each response category considering the nature of response. Later, responses to different items belonging to each area were added to yield joint responses pertaining to that particular area. These were converted into a percentage figure for the purpose of analysis and comparison.

RESULTS AND CONCLUSION

Attitudes of Students

— On the basis of analysis of responses given by boys and girls from grades VI to IX in respect of items related to attitudes of students towards computer education, it can be said that the attitudes of 84% students in total group were positive while 16% pupils were found to exhibit negative attitude towards computer education. The largest number of students with positive attitudes was found to belong to grade VI (93%).

— The attitudes of girls towards computer education were found to be somewhat more positive than the attitude of boys in all classes.

— Among students belonging to the different classes, a large proportion of boys and girls belonging to IXth grade were found to have negative attitudes towards computer education (34%). This implies that the level of satisfaction of students in 9th grade is lower as compared to the level of satisfaction of students in other grades.

— The most encouraging fact from the study happens to be that most of the students in

VIIth grade have been found to exhibit positive attitudes toward computer education. This indicates that students in junior grade are likely to take to computers in a big manner and that their inclination is most positively pronounced (93%).

Parental Attitudes

— On the basis of analysis of the responses given by boys and girls from grades VI to IX in respect of items related to attitudes of parents toward computer education, it can be said that the attitudes of parents of students studying in grade VI through IX are mostly positive (95%), while parents of only 5% students have been found to exhibit negative attitudes towards computer education. While the parents of students studying in 4th grade, 8th grade and 9th grade have been found to express generally positive attitudes toward computer education, still, almost 10% parents of IXth grades were found to exhibit negative attitudes toward computer education.

— The attitudes of parents of girls in all grades were found to be highly positive. This shows high aspiration of parents of girls toward computer education for their wards. Nonetheless, 14% parents of girls of 6th class exhibited negative attitudes. This indicates that almost one in seven parents of girls students studying in 6th grade may not be convinced of the utility of computers for the females at this grade level.

These findings can also be interpreted to imply that parents are convinced of the utility of computer education and they firmly want that their wards must learn computer in their school years.

Satisfaction

— On the basis of responses given by boys and girls to the different items related to satisfaction of students from computer education, it can be concluded that 83% students in the sample have been found to be satisfied with computer education in the school. At the same time, 17% students were found to be dissatisfied with computer

education. The largest number of students with positive satisfaction belonged to grade six (92%). On the other hand, as many as 35% students of IXth exhibited dissatisfaction with computer education. This further supports the view that computer education programme for IXth grade student in particular needs to be considerably improved.

Interest

— On the basis of analysis of responses given by boys and girls in respect of different items related to interest of students towards computer education, it can be said that 83% students in the total group are definitely interested in computer education. The largest number of interested students was found to be studying in grade six (91%). On the other hand, as many as 24% students of 9th grade exhibited disinterest toward computer education

— The girls were found to be more interested (85%) in computer education than boys (81%) in all grades

Practices

— On the basis of analysis of responses given by the boys and girls in respect of the items related to practices adopted in the institution for computer education, it can be concluded that 60% students of both sexes in the total group are generally satisfied with the manner computer education is being organised in the school. At the same time, almost 40% pupils still have dissatisfaction with the practices being followed. Thus, the practices are needed to be changed for better if student's reactions are taken as criterion for improvement.

— It has been found that the largest number of students satisfied with practices for computer education belong to 7th grade (72%), while as many as 60% students of IXth grade exhibited dissatisfaction with the practices related to computer education. In different grades, girls were found to be somewhat more satisfied with the ways and means of providing computer education.

Teachers

— 91% students in the sample opined that their instructors possessed the ability to explain things to them regarding computers. About 80% students expressed their satisfaction with the instructions they were receiving from their instructors. This percentage was almost same for all the grades including grade IX in which attitudes were relatively more negative.

— As far as the perceived attitudes of instructors towards the students are concerned, it was noted that 90% students were of opinion that their computer instructors have a very helpful attitude towards all students. Even in grade IX, this percentage was quite satisfactory (74%).

— Students, in general, were found to be well impressed with the mastery over subject matter of computer instructors. Only 23% students felt that their instructors felt uneasy or embarrassed when they confronted them with some questions on the subject.

Suggestions

— About 91 students of all classes firmly demanded more time for computer practicals.

The percentage of respondent voicing the above view was found significantly high for all classes and for both sexes (ranging between 86% to 95%).

— 89% students expressed a desire for more computer magazines and journals saying that they should have access to magazine and journals on computers in school library.

Implications

In the light of above discussion, following suggestions can be summarised for improvement in computer education in the school:

- (a) School authorities should pay more attention towards the improvement in computer instruction especially in grade nine as it has been found that students in this class have been facing maximum

difficulties in learning the subject. A follow up study may be initiated to diagnose the nature of difficulties and launch a remedial programme

- (b) It is implied that the efficiency of instructors needs to be raised further to satisfy student's curiosity about the subject and to fulfil their academic expectations. In other words, their teaching skills need to be further improved for greater impact.
- (c) There is need to introduce periodic evaluation of the performance of students on computers and to test their computer awareness so that monitoring and feedback can become regular processes in the entire programme of computer education.
- (d) Steps are needed to be taken to provide adequate number of books, magazines and journals on computer science in school library and to provide access to students to the same. This would help them to get academic support.
- (e) If possible, the number of periods for computer education should be more than two per week and the number of students per group should be smaller than what it is at present.

The overall conclusion from the study is that students are satisfied with computer education and are deeply interested in learning about computers. However, there is a further need to modify the system of computer education so as to provide better facilities in smaller groups to raise the degree of satisfaction and achievement among students.

Even though the present results can be described as having limited value since the investigation was confined to one institution, the investigators feel that valuable insights have been received on several aspects related to computer education to enable sister institutions improve their programmes by way of inference.

Problems of Deprived Children

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There are hardly a few problems more serious than the education of the deprived or disadvantaged school children in Indian society. The most complex problem which is being confronted by the researchers in the world is how to define the concept of socially disadvantaged child. A child can be considered socially disadvantaged if due to his life situations, he is deprived of facilities to enjoy that which normally a society should provide to its children, such as a normal home, where he can find fulfilment of his needs, opportunity for leisure and play, opportunity for intellectual development, emotional happiness, freedom from exploitation and isolation and a proper physical, psychological and social environment that ensures his development into a normal personality.

The child was considered socially disadvantaged if due to his life situations, he was deprived of the necessary facilities in the society which are important to the development of a balanced personality. These facilities include better economic conditions of the family, wholesome social environment, parental love and other opportunities for leisure and play necessary for his physical development and effective social participation, etc.

Although research on socially disadvantaged children has not lagged behind in this country, not much attention has been paid to the development of strategies for improving cognitive skills and motivations of the socially disadvantaged

children. Remedial measures for all-round development of their cognitive abilities have to be spelt out by the educationists and psychologists. Such a democratic commitment of educating all such children to their fullest social and intellectual potential is a national goal. In fact, this has been the socio-political goal of the entire world in the second half of this century.

Stagnation

In India, the need of the hour is to put special emphasis on offering well structured teaching programmes to the vast socially disadvantaged masses with a view to bringing them on par with the advantaged section of the society. In spite of well intentional efforts of educators, the

disadvantaged children still remain in isolated island of stagnation. The need here goes to a long way in launching a massive revolutionary programme of education to loosen the bed lock of stagnation of these isolated islands and to swell them into the midst of the national mainstream. The emphasis should be given on school education and there is a great need to bring all such children to the school.

Immediate Attention

Education of the socially disadvantaged children has received a great deal of attention from the educators and psychologists and policy makers in the Western countries, but not so much in our country which requires its immediate and vast attention, because the situation in India is somewhat different. For centuries, the Scheduled Caste, Backward class or socially disadvantaged groups have been living under conditions of intense social disadvantages, prevented from sharing in the mainstream of socio-cultural and economic life of high society. The poor socio-cultural atmosphere in which they have lived for ages has resulted in their constituting the bulk of what is today called "the weaker sections of the society" in India.

The problem of socially disadvantaged school children is very important and should be given the top priority for conducting research work, as social disadvantage leads to many deficiencies in the child to develop into a balanced adjustment. Hence, the demand of the day is to study the various types of adjustment patterns of socially disadvantaged children in comparison with their academic achievements and then seek to remove the social disadvantages.

The present study deals with the adjustment problems of the male and female socially disadvantaged school children in relation to their academic achievement. It aims at the following:

— To measure the adjustment patterns and to find out the differences in the level of three types of adjustment i.e. social, emotional and educational.

— To know the adjustment problems of the socially disadvantaged school children in relation to their academic achievement.

— To find out the sex differences in the total adjustment as well as areas of adjustment and in the academic achievements of socially disadvantaged school children.

To proceed with the research work in the present investigation, the following were hypothesized:

— There are no significant differences in the adjustment patterns as well as three areas of adjustment i.e. emotional, social and educational adjustment between male and female socially disadvantaged school children.

— There are no significant differences between the male and female socially disadvantaged children in academic achievements.

— There are no significant differences in the level of emotional, social and educational adjustment as well as the total adjustment of three groups of socially disadvantaged children formed on the basis of academic achievement i.e. high, middle and low groups.

Sample - The sample of the present study consisted of 200 socially disadvantaged school children belonging to sixth class of four different schools of Patiala city. These schools were situated in the slum areas. In these schools, only the socially disadvantaged children were selected on the basis of their families' socio-economic status i.e. on the basis of the income, occupation and educational qualification of their parents. Majority of them belonged to the Scheduled castes and Scheduled tribes communities. Generally, these students belonged to the poor families. The age range of these students of the total sample taken was between 11-16.

Tools used : In this study, the following tools were used :

1. *Adjustment Inventory for School Children* : Adjustment Inventory of Dr. A.K.P. Sinha and R.P. Singh (1973) was used to find out the adjustment patterns of students. For the convenience of the Punjabi-speaking students, the inventory was translated from Hindi to Punjabi. It consists of 60 questions indicating the significant problems in three areas of adjustment. The questions were to be answered in 'Yes' or 'No'. The split-half reliability coefficient of the total adjustment of this test was 0.95 and test-retest reliability coefficient was 0.93 and by K-R formula, the same is 0.94.

2. *Academic Achievement Scores* : To measure the academic achievements of the socially disadvantaged students, the total scores of the annual results were taken from their school records.

Design and Procedure

The school adjustment inventory was administered to 200 (131 males and 69 females) socially disadvantaged school children in order to measure above three types of adjustment. Three groups of Ss were formed on the basis of their academic achievement scores i.e. high, middle and low achievement groups on the basis of their deviation scores. The total marks obtained by them in their annual examination were taken to measure the academic achievements. In order to find out significant differences on adjustment scores between three groups of Ss, ANOVA—test was applied. But the significant differences in their mean scores between males and females as well as between two groups of Ss were found by applying t-test.

Results and Discussion

The results (Table 1) revealed that there was no significant differences between males and females on total adjustment score ($t=0.38$). Similarly, no significant differences were found

between male and female on emotional adjustment ($t=0.12$), social adjustment ($t=0.78$), and educational adjustment ($t=1.60$), as all these t-values are statistically non-significant. On the other hand, significant differences between male and female was found on academic achievements ($t=5.53$). The females were found to be better ($M=367.2$) in studies than the males ($M=289$).

In order to form three groups of Ss on the basis of academic achievements of the students, P_{75} and P_{25} scores on academic achievements were found out for males and females separately. In the case of males, P_{75} and P_{25} values were found to be 352.25 and 178.07 respectively. In the case of females, P_{75} and P_{25} values were calculated to be 407.83 and 268.44 respectively. In the case of males, those who obtained score more than 352 were included in the high academic achievement group (HAG), and those who got score less than 178, were kept in the low achievement group (LAG), while those who scored between 178-352, were retained in the middle academic group (MAG). In the case of females, those whose scores was more than 407, were included in the HAG, those who got score less than 268 formed the LAG and those whose score was between 268-407, were retained in MAG. In this way, 39 males and 24 females were found in the HAG, 66 males, 34 females in MAG and 26 males and 11 females in LAG. The means and SDs of the three areas of adjustment scores are presented in Table 2.

In order to find out significant differences between three groups of Ss on emotional, social and educational adjustment, two-way analysis of variance was applied with a factorial design of 3×2 i.e. three levels of academic achievements and two levels of sex. The results (Table 3) revealed that there were significant differences on emotional adjustment on the basis of three groups of Ss ($F=8.75$, $p<.01$), but not on the basis of sex ($F=0.08$), and interaction between groups and sex

($F=0.21$). It is also evident from the results (Table 4) that in the case of male Ss, significant differences were found between HAG and MAG ($t=3.55$, $p<0.01$) as well as between MAG and LAG ($t=2.13$, $p<0.05$), but not between HAG and LAG ($t=1.70$). The male Ss of MAG ($M=5.5$) had obtained more score as compared to those of HAG ($M=3.26$) which means that male Ss of MAG were emotionally unstable and Ss of HAG were emotionally adjusted. In the case of the females, significant differences were found between HAG and MAG ($t=2.09$, $p<0.05$), again female Ss of MAG have secured more scores than those of HAG, meaning thereby that female Ss of MAG were emotionally unstable, whereas female Ss of HAG were emotionally adjusted.

So far as the social adjustment is concerned, it was found again that significant differences existed in the case of the three groups of Ss ($F=4.20$, $p<0.05$) but not in the case of sex ($F=0.138$) and interaction between groups and sex ($F=0.84$). While comparing the means scores of social adjustment between various groups, it was found that there were significant differences between HAG and MAG ($t=2.93$, $p<0.01$), between MAG and LAG ($t=8.07$, $p<0.01$), and between HAG and LAG ($t=2.09$, $p<0.05$). The male Ss of MAG ($M=6.30$) scored more than male Ss of LAG ($M=4.12$). Hence, it is inferred from these results that Ss of MAG were submissive in nature whereas male Ss of LAG were of aggressive behaviour. In the case of the female Ss, no significant differences were found on social adjustment score between HAG and MAG ($t=0.70$), between MAG and LAG ($t=0.29$) and between HAG and LAG ($t=0.32$).

On educational adjustment again, it was found that significant differences existed between various groups of Ss ($F=7.68$, $p<0.01$) and not in the case of sex ($F=3.41$) as well as interaction between groups and sex ($F=0.19$). In the case of male Ss, significant differences were found

between HAG and MAG ($t=6.90$, $p<0.01$), between MAG and LAG ($t=2.92$, $p<0.01$) and between HAG and LAG ($t=2.84$, $p<0.01$). The mean scores on educational adjustment of these groups show that MAG ($M=6.50$) had got more scores than LAG ($M=4.66$) and HAG ($M=2.98$) which means that the male Ss of MAG were poorly adjusted with their curricula and co-curricular programme in the school, whereas those of HAG were very much interested in their school programme. In the case of females, significant differences were found only between MAG and LAG ($t=2.32$, $p<0.05$). The female Ss of LAG having scored more ($M=4.42$) were poorly adjusted in the school programme as compared to the female Ss of HAG ($M=2.89$), who seemed to be well adjusted in their school programme.

While considering the total adjustment of socially disadvantaged school children, it was observed that significant differences were found on the basis of three groups of Ss ($F=13.10$, $p<0.01$), but not on the basis of sex ($F=0.69$) as well as interaction between groups and sex ($F=0.25$). In the case of male Ss, significant differences were found between Ss of HAG and MAG ($t=4.31$, $p<0.01$) as well as between HAG and LAG ($t=3.24$, $p<0.01$) but not between MAG and LAG ($t=0.36$). The mean scores of total adjustment reveal that MAG ($M=15.70$), and LAG ($M=15.22$) had got more score as compared to HAG ($M=10.74$) meaning thereby that male Ss of HAG were well adjusted, whereas those belonging to LAG and MAG were poorly adjusted. Of course, in the case of female Ss, no significant differences were found between HAG and MAG ($t=1.77$), between MAG and LAG ($t=0.11$) and between HAG and LAG ($t=1.78$).

Conclusions

1. There are no sex differences on total adjustment of the socially disadvantaged school children.
2. There are no significant differences between male and female socially

disadvantaged students on emotional social and educational adjustment.

3. Significant differences exist between male and female socially disadvantaged school children of 6th class on their academic achievement, the females are better in academic performance than the males.
4. There are significant differences on emotional adjustment between three groups of socially disadvantaged students formed on the basis of their academic achievements.
5. The male and female Ss of high achievement group are emotionally stable, whereas those of middle achievement group are emotionally unstable.
6. The male Ss of middle achievement group are submissive in nature, whereas those of low achievement group are of aggressive behaviour.
7. On social adjustment also, significant differences existed between three groups of socially disadvantaged school children formed on the basis of their academic achievements.
8. Significant differences between three groups of academic achievers of socially disadvantaged students are again found on educational adjustment as well as total adjustment.
9. The male and female Ss of high achievement group are well adjusted in their school programme, whereas those of low and middle achievement group, are poorly adjusted with their curricula and co-curricular programme in the school.
10. The male Ss of high achievement group are well adjusted, whereas those of low and middle achievement group are poorly adjusted.

TABLE I

Means, SDs and t-ratios of the scores of three areas of adjustment of male and female Ss.

Areas of adjustment	Group	N	M	SD	SE	dm	t-ratio
Total Adjustment	Male	131	14.32	6.13	0.53	0.90	0.38
	Female	69	13.96	6.14	0.73		
	Total	200	14.18	6.22			
Emotional	Male	131	4.37	3.30	0.38	0.50	0.12
	Female	69	4.30	3.37	0.40		
	Total	200	4.34	3.32			
Social	Male	131	5.24	2.38	0.20	0.98	0.78
	Female	69	6.02	2.06	0.24		
	Total	200	5.54	2.36			
Educational	Male	131	4.08	2.46	0.21	0.34	1.64
	Female	69	3.52	2.28	0.27		
	Total	200	3.88	2.58			
Academic Achievement	Male	131	289	11.2	9.79	14.12	5.53*
	Female	69	367.20	84.5	10.18		
	Total	200	315.97	118			

* ($p < .01$)

TABLE 2
Means and SDs of scores of three areas of adjustment for three achievement groups

Group	Sex	N	Emotional		Social		Educational		Total	
			M	SD	M	SD	M	SD	M	SD
High	Male	39	3.26	2.60	4.98	2.28	2.98	2.08	10.74	5.44
	Female	34	3.34	2.56	5.76	2.10	2.89	2.34	12.28	6.12
	Total	73	3.30	2.58	5.34	0.27	2.93	2.20	11.45	5.81
Middle	Male	66	5.50	4.04	6.36	2.22	6.50	3.28	15.70	6.24
	Female	24	4.85	2.88	6.16	2.24	3.5	2.06	15.25	6.45
	Total	90	5.32	3.80	6.26	2.22	5.7	3.72	15.58	6.35
Low	Male	26	4.20	1.9	4.12	1.08	4.66	2.52	15.22	5.52
	Female	11	4.32	2.46	5.96	1.72	4.42	1.78	15.06	3.88
	Total	37	4.23	2.08	4.66	1.61	4.58	2.32	15.17	5.08

TABLE 3
Analysis of variance of scores of three areas of adjustment for three groups of male and female Ss

Area of adjustment	Source of variance	Ss	df	MS	F ratio
Emotional	Groups	172.63	2	86.315	8.75*
	Sex	0.82	1	0.82	0.08
	Interaction	4.16	2	2.08	0.21
	Error	1912.91	194	9.85	
Social	Groups	43.63	2	21.81	4.20**
	Sex	0.72	1	0.72	0.138
	Interaction	8.76 b	2	4.37	0.84
	Error	1007.13	194	5.19	
Educational	Groups	78.47	2	39.23	7.65*
	Sex	17.42	1	17.42	3.41
	Interaction	1.97	2	0.98	0.19
	Error	990.49	194	5.105	
Total Adjustment	Groups	883	2	441.5	13.10
	Sex	20	1	20.0	0.69
	Interaction	17	2	8.5	0.25
	Error	6536	194	33.69	

* Significant at .01 level

** Significant at .05 level

TABLE 4
Comparison of t-ratios of scores of three areas of adjustment of male and female Ss for high, middle and low groups of academic achievement

	Emotional		Social		Educational		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
HAG & MAG	3.55	2.09**	2.93*	0.70	6.90*	1.05	4.31*	1.77
MAG & LAG	2.13**	0.56	8.07*	0.29	2.92*	1.37	0.36	0.11
HAG & LAG	1.70	1.15	2.09**	0.32	2.84	2.32**	3.24*	1.78

* Significant at .01 level

** Significant at .05 level

The 'Sunday School'

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The mind of children at 4 or 5 years of age does not become ready for formal education and examination. It is psychologically a period of free play activity. Anything beyond nursery rhymes and stories with familiar animals will create a sense of unhappiness and frustration in their mind, will induce a sense of fear for learning and will thus prove detrimental to their developing mind. Whatever is taught to the child should be concrete and within the range of his observation, perception and experience. The abstract idea about God, heaven and hell and the like as is given through Catechism only burdens the child mind and does more harm than good. Nature is the child's best teacher and as such the child should be left undisturbed till he or she is about 10 years of age. Children below this age level, the authors argue, should not be brought to Sunday school.

The study was conducted on ten Presbyterian churches in greater Aizawl town. They were selected on the basis of stratified random sampling—three from among the big churches, four from among the medium churches and three from the small churches, the size of the churches being considered from the number of membership of each of the churches. The data for the study were collected mainly through questionnaires and interviews both structured and un-structured. Annual bulletins of the Mizo Sunday School Union (MSSU) and other related papers were also used for collection of relevant information.

Findings

In greater Aizawl town 90 per cent of the churches are Presbyterian, the rest being of

denominations like the Salvation Army, the Seventh Day Adventist, the United Pentecostal Church, Jehova's Witness which developed in the forties and fifties of the present century and also many lesser known churches of local origin like Isua Krista Kohran, Biakmawia Pawl and the like. The Sunday Schools are organized under the aegis of the MSSU which prescribes the courses of studies, publishes reading materials, conducts annual examinations, declares results and awards certificates and medals. Learners are divided into classes called Departments on the basis of their age. Pupils of 4 and 5 years of age are put in the Beginners' Department, between 6 and 8 in Primary, between 9 and 11 in the Junior, between 12 and 14 in the Intermediate, between

15 and 17 in the Senior, between 18 and 25 in the Youth and from 25 upwards in the Adult Departments. Besides, a register of names of those children below 4 years is maintained by each church within their jurisdiction showing the number of prospective pupils for the beginners' department. This is known as the 'Craddle Roll'. Thus registers of different departments together show the total number of members of a church in any locality as well as overall percentage of attendance in Sunday School. Classes are held for about an hour. But for children in the Beginners' Department classes are conducted for 30 to 35 minutes. A congregational prayer is held in the main hall of the church before the members are separated into their respective Departments for holding class. There is a prescribed syllabus with printed lessons for all the different departments prepared by the MSSU. One lesson unit is meant for one Sunday and is preceded and followed by reading from certain prescribed verses from the Bible, which are meant for memorising by the pupils. A concluding worship service with mass singing and praying is held marking the end of each Sunday's teaching programme.

Graded textbooks with lesson units are provided for different departments. One book contains 49 to 52 lessons. These include revision lessons as well after every four or five lesson units. There are three such textbooks meant for three consecutive years of each department. The lesson provides simple episodes from the Bible. They cover both the Old and the New Testaments and are prepared to suit the understanding ability of each age range. For beginners lessons are mostly in the form of stories, the story of Adam and Eve, the story of Abraham and the like. The lessons become more intensive and reflective as one goes higher up in the grades. Acts, Psalms, Proverbs, Revelations, the Four Gospels, the Genesis, etc., are all systematically provided in the lessons for different grades. For the Adults Department, a description of St. Paul's missionary

journey, his letters, besides other Saints are particularly prescribed. The lessons are so organized that an individual knows thoroughly the Bible by the time he becomes an adult member of the society and develops strong faith in Christian doctrines.

Examinations are conducted for each grade in November every year. But promotion to the next higher grade does not depend on examination results. It is determined by age alone. Certificates are awarded to those securing good marks and medals to those securing excellent marks. Medals are also there for regular attendance in Sunday school. Besides regular Sunday school teaching programmes, Sunday school afternoon service, Christmas Carol Service, Sunday school teachers' seminar, Vacation Bible school, etc. are also other features of the total Sunday school programmes.

Suggestion

The whole Sunday school programme is too much inclined towards memorization of Biblical verses. Only those verses that are morally, ethically and spiritually invigorating may be isolated out and emphasized for memorization. A thorough knowledge of the Bible may be necessary for those who will opt for Evangelical services, but may not be necessary at all for others. Therefore, instead of extensive Biblical lessons, such lessons as would develop sympathy and compassion for mankind on earth, as would provide an urge for improving the quality of human life should be incorporated in the Sunday school curriculum along with Biblical lessons.

Catechism provides tailored answers to questions from the Bible. It induces parrot-like memorization and, thereby, stifles children's thinking and imagination. It should therefore, be removed from children's learning materials.

It has been observed that the habit of smoking and drinking is rampant among the adult Sunday goers as well. It means that Sunday school education has no impact on developing a negative

attitude towards their smoking and drinking. No Sunday school lesson has been found to teach people about the evils of smoking and drinking. Therefore, Sunday school should provide lessons on positive health habits as well which will include the evils of addiction of any form.

Providing literacy to enable one to read the Bible on one's own was once the prime objective of all Sunday schools. This objective seems to have been lost sight of. Sunday school no longer takes upon itself the responsibility of providing instruction in literacy to the adult illiterates. Rather, the objective has been narrowed down to just providing Biblical information and instilling Christian doctrines and dogmas. The following aims and objectives should, therefore, be visualized while teaching and framing Sunday school curricula : (a) liquidation of illiteracy, (b) Instilling social, intellectual, moral, ethical and spiritual values and healthy habits and (c) developing wholesome personality by instilling human values of love, compassion and sympathy, non-violence, piety and forgiveness as taught in the Bible

Providing practical skills to women and girls for good home-making like sewing, knitting, embroidery, nutrition, child-care, maternity health and hygiene through Sunday school was once emphasized upon by early lady missionaries. But unfortunately these are not given much importance in Sunday schools now a days. These should, therefore, find prominent place in the Sunday school curricula for girls and women

Conclusion

Every religion rests on certain set doctrines and dogmas. There have always been conscious attempts by its adherents to instil these into the minds of the young by means of indoctrination. Schools established by the church provide an effective means to achieve this end. Thus, Sunday school has served the purpose of instilling Christian values and beliefs into the minds of those attending them. With the rapid growth and spread of

scientific knowledge religious beliefs in the minds of men have weakened. There is now a growing demand everywhere for secular education. In the USA religious prayer has been abolished from all the State maintained educational institutions. This is all because of the increasing impact of science.

Science provides genuine knowledge. According to George Thompson, "All religions are based on false assumptions," "and as science grows", says Thompson, "religion decays." Education in all general schools is completely secular all over the world today. Therefore, when the child learns geology and biology in general schools and at the same time studies Genesis in Sunday school, he gets confused. A state of apathetic mind is, therefore, created in the child which is not congenial to rational learning and thinking

Education is distinguished from indoctrination. When education stimulates thought, indoctrination anaesthetizes it. It tends to stereotype any individual's pattern of thinking process. Progress of civilization has been possible because of some people's free thinking. Religion through indoctrination usurps one's free thinking ability. Whenever people's free and critical thinking was hindered in the past through excesses in religiosity, human progress was thwarted. In its present form Sunday school instruction does not attract the children's mind. They feel bored. The more intelligent the child is, the more is the boredom.

To overcome these defects we have to drastically reorient Sunday school curricula and methodology of teaching in the light of psychological principles. If we are aware of these dangers from religious education, we shall be able to save our children from developing mediocrity through it. We shall be able to provide through Sunday school the kind of education that will not stifle the mind and will be at the same time morally, ethically and spiritually invigorating.

Values of Pupil Teachers

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The values of an individual are very important determinants of his behaviour. These are the parts of an individual's inner life expressed through behaviour. The value is something that pervades every thing. It determines the meaning of the world as a whole as well as meaning of every person, every event and every action. These are organising factors within personality and are especially important in relation to morals and characters (Garrison 1962). It has been pointed out that man acts to satisfy his wants so anything that satisfies a human want becomes thereby a value. An objective of education is to shape the personality of its students and develop desirable values in them for their adjustment.

The knowledge of the values is essential for the development of personality. In the present study attempt has been made to study the values of teacher training pupil teachers.

Objectives

- To compare the values of secondary and elementary boys pupil teachers
- To compare the value of secondary and elementary girls pupil teachers.

The study has been delimited in respect of values and samples. Only ten values were taken into consideration viz. Religious, Social, Democratic, Aesthetic, Economic, knowledge, Hedonistic, Power, Family Prestige and Health. 200 pupil teachers — 100 secondary and 100 elementary teachers of Haryana were taken into

account. Both sex were considered

Hypotheses

- No significant difference exists in the values of secondary and elementary male pupil teachers.
- No significant difference exists in the values of secondary and elementary female pupil teachers.

The sample of 200 pupil teachers (100 secondary and 100 elementary) were selected from R.B.S. College of Education, Rewari. The training college was selected randomly from two available teacher training colleges in Haryana. After selecting the sample, the personal value questionnaire (PVQ) was administered to the sample subjects. These were got filled out and

TABLE I

't' value showing the significance of difference between Secondary and Elementary boys pupil teachers

Values	Secondary Pupil Teachers		Elementary Pupil Teachers		't'	Level of significance
	Mean	S.D	Mean	S.D		
Religious	10.00	2.88	12.28	3.72	3.42	.01 Level
Social	16.16	3.05	16.10	3.17	0.09	N. S.
Democratic	16.04	3.78	15.72	3.22	0.46	N. S.
Aesthetic	10.14	3.78	11.72	2.23	2.78	.01 Level
Economic	8.32	2.46	9.20	3.94	1.34	N. S.
Knowledge	14.72	2.98	12.83	3.05	3.15	.01 Level
Hedonistic	9.92	2.52	10.10	2.45	0.36	N. S.
Power Value	8.00	2.57	9.00	3.13	1.75	N. S.
Family Prestige	12.12	3.83	10.33	3.77	2.29	.01 Level
Health Value	14.78	3.32	12.72	3.56	2.99	.01 Level

the standard instruction given in the questionnaire. The scripts were scored out and submitted for analysis.

The table shows that religious value 3.42 is significant at .01 level of significance. The mean value of subjects placed in elementary group is 12.28 which is greater than subject placed in Secondary Group (10.00). From this it can be interpreted that elementary pupil teachers are more religious and God fearing than secondary pupil teachers. Aesthetic value 't' 2.78 is significant at .01 level. Further the mean of the pupils placed in elementary group is 11.72, higher than the mean 10.14 of secondary group. From this it can be interpreted that elementary pupil teachers are more aesthetic than secondary pupil teachers.

The 't' 3.15 of knowledge value is significant at 0.01 level. The mean 14.72 of secondary group is higher than the mean 12.83 of elementary group. The secondary students have significant knowledge than elementary group. This value stands for love of knowledge of theoretical principles of any activity and love of discovery of truth. 't' 2.20 value of family prestige is significant at .05 level. Mean 12.12 of secondary group is higher than 10.33 of elementary group. It

can be interpreted that the secondary boys are more particular in their family prestige. It is the conception of desirability of items of behaviour, roles, functions and relationship as would become one's family status.

't' 2.99 for health value is significant at .01 level. The mean 14.78 of secondary pupil teachers is higher than the mean 12.72 of elementary pupil teachers. The results clearly show that secondary pupil teachers are more careful about their health. It is the consideration for keeping the body in a fit state for carrying out one's normal duties and functions. Null hypothesis of values like Religious, Aesthetic, Knowledge, Family Prestige and Health are rejected.

Rest of the values viz. Social, Democratic, Economic, Hedonistic and Power value are found to be insignificant even at .05 level of confidence and null hypotheses retained.

't' value 2.55 in respect to social value is significant at .05 level. This shows that difference is real. The mean 17.06 of secondary is greater than mean 15.30 of elementary students. It is clear that secondary girls pupil teachers are more social than elementary girls pupil teachers. 't' value 2.86 of economic value is found to be significant

TABLE 2

't' value showing the significance of difference between Secondary and Elementary girl pupil teachers

Values	Secondary Pupil Teachers		Elementary Pupil Teachers		't'	Level of significance
	Mean	S.D.	Mean	S.D.		
Religious	11.92	2.27	12.50	2.25	1.28	N.S.
Social	17.06	3.46	15.30	3.46	2.55	.05 Level
Democratic	16.66	4.47	15.70	3.90	1.15	N.S.
Aesthetic	9.88	3.06	9.80	3.16	0.13	N.S.
Economic	8.76	3.61	10.60	2.77	2.86	.01 Level
Knowledge	12.96	3.51	12.40	2.27	0.95	N.S.
Hedonistic	9.38	2.84	10.24	2.69	1.56	N.S.
Power Value	7.52	2.13	7.15	3.15	0.69	N.S.
Family Prestige	13.62	4.98	13.24	4.00	0.42	N.S.
Health Value	11.76	3.09	12.50	3.21	1.17	N.S.

at .01 level. The mean 10.60 of secondary pupil teacher is more than 8.76 of elementary girls pupil teachers. From this it may be interpreted that elementary girls pupil teachers are more economic than secondary pupil teachers. This value stands for desire for money and material gains.

Rest of the values, viz; Religious, Democratic, Aesthetic, Knowledge, Hedonistic, Power value, Family Prestige and Health were not found to be significant even at .05 level of significance. From the above interpretation following conclusions may be drawn:

1. Elementary male pupil teachers are more religious, god fearing than secondary boys pupil teachers. They were more aesthetic than secondary male pupil teachers.
2. Secondary male pupil teachers have

significant knowledge than elementary male pupil teachers. They are more particular in their family prestige and are more particular about their health.

3. There is no significant difference in both secondary and elementary pupil teachers in Social, Democratic, Economic, Hedonistic and Power values.
4. The secondary girls pupil teachers are more social than elementary girls pupil teachers. The elementary girls pupil teachers are more economic than secondary pupil teachers. In case of other values, viz; Religious, Democratic, Aesthetic, Knowledge, Hedonistic, Power value, Family Prestige and Health are not significant.

Impact of Incentives on Children's Education

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Office of the Field Adviser NCERT for Uttar Pradesh organized a workshop on the impact of the incentives on education of the weaker sections of society (Scheduled Caste and Scheduled Tribe children). Secondary data was not available on this issue from any source. Although several studies have been conducted on the socio-economic and psychological aspects of SC and ST population, specific studies on their educational problems and particularly on the educational economics are few.

A questionnaire with the view to elicit informations related to this topic was prepared. First two items in this questionnaire pertain to the preliminary information like the name and address of the respondent. Data regarding the types of incentives and the number of SC and ST students receiving those incentives were required to be filled in next two items. Conditions for entitlements to these incentives were also required to be mentioned. The names and addresses of the important SC and ST persons who were benefitted by the incentives received in their students' life were also required to be mentioned.

The draft of the questionnaire was given to the heads of the leading educational institutions of Allahabad. It was finalized on the basis of their

suggestions.

To get the representation of the schools in rural and urban areas, SC and ST- dominated and other areas were kept in mind while distributing the questionnaire. Still, the sample is random by and large, as no particular schools were chosen for the study.

900 copies of the questionnaire were distributed to the teachers with the help of the following institutions and persons ;

1. Directorate of Education (Secondary).
2. Directorate of Education (Basic).
3. Board of Secondary Education.
4. Bureau of Psychology.
5. Govt. Central Pedagogical Institute.

6. State Institute of Education.
7. District Inspectors of Schools.
8. Zila Basic Shiksha Adhikaris.

The organisers received 142 responses by the date of preparation of this write-up. Thus the response was 15.77 per cent from 26 districts as follows :

District	No of Responses
Allahabad	41
Agra	13
Naunital	09
Meerut	20
Lucknow	11
Varanasi	07
Faizabad	07
Kanpur	04
Chamoli	03
Dehradun	02
Basti	01
Jhansi	01
Bahraich	01
Mathura	01
Etawa	01
Farrukhabad	01
Mirzapur	05
Pauri Garhwal	04

District	No of Responses
Almora	03
Budaun	01
Jalaun	01
Jaunpur	01
Pratapgarh	01
Pithoragarh	01
Tehri Garhwal	01
Moradabad	01

The types of schools, according to the number of classes, covered are as follows :

Types of School (Class - wise)	Number of Respondents
Classes . I V	43
I VIII	05
VI VIII	08
I X	12
VI X	62
I XII	03
III XII	02
VI XII	07

Item No. (3) pertained to the types of incentives provided to the number of Scheduled Caste. The data received is given in the following tables :

Incentive	Class	Number of Beneficiaries
(i) Scholarship	I	Number of Students 832
		No of Students receiving scholarship 15
		% receiving scholarship 1.80
	II	Number of Students 779
		No of Students receiving scholarship 23
		% receiving scholarship 2.95
	III	Number of Students 852
		No of Students receiving scholarship 19
		% receiving scholarship 2.23
	IV	Number of Students 608
		No. of Students receiving scholarship 27
		% receiving scholarship 4.44

Incentive	Class	Number of Beneficiaries	
(ii) Free Uniform	V	Number of Students	423
		No. of Students receiving scholarship	27
		% receiving scholarship	6.38
	VI	Number of Students	890
		No. of Students receiving scholarship	224
		% receiving scholarship	25.16
	VII	Number of Students	800
		No. of Students receiving scholarship	311
		% receiving scholarship	38.37
	VIII	Number of Students	777
		No. of Students receiving scholarship	316
		% receiving scholarship	40.66
(ii) Free Uniform	IX	Number of Students	1405
		No. of Students receiving scholarship	798
		% receiving scholarship	56.79
	X	Number of Students	1275
		No. of Students receiving scholarship	743
		% receiving scholarship	58.27
	XI	Number of Students receiving scholarship	73
		% receiving scholarship	77.65
	XII	Number of Students	58
		No. of Students receiving scholarship	42
		% receiving scholarship	72.41
	Combined data of all classes received from two schools :		
(ii) Free Uniform		Number of Students	557
		No. of Students receiving scholarship	462
		% receiving scholarship	82.94
	I		
	II		4
	III		1
	IV		2
	V		4
	VI		2
	VII		0
	VIII		1
	IX		4
	X		4
			2

Incentive	Class	Number of Beneficiaries
(iii) Free Books	I	10
	II	22
	III	23
	IV	29
	V	23
	VI	36
	VII	23
	VIII	43
	IX	52
	X	36
	XI	05
	XII	01

(iv) Other Incentives

- (a) SC children are exempted from payment of Development Fee in primary schools.
- (b) Books are provided free of charge from Book Bank.
- (c) Girl students were given free wool for making sweaters in hill schools

It may be noted that complete information regarding disbursement of scholarship to the children in primary schools is not known, since the scholarship amount is sent directly to the homes of the children.

Item No. (4) pertained to the types of incentives provided to the number of Scheduled Tribe students. The data received is given in the following table :

Incentive	Class		Number of Beneficiaries
(i) Scholarship	VI	Number of Students	156
		No. of Students receiving scholarship	46
		% receiving scholarship	29.48
	VII	Number of Students	158
		No. of Students receiving scholarship	89
		% receiving scholarship	56.32
	VIII	Number of Students	149
		No. of Students receiving scholarship	95
		% receiving scholarship	63.75
	IX	Number of Students	165
		No. of Students receiving scholarship	118
		% receiving scholarship	71.51
	X	Number of Students	143
		No. of Students receiving scholarship	96
		% receiving scholarship	67.13

Incentive	Class	Number of Beneficiaries	
(i) Free Uniform	XI	Number of Students	13
		No of Students receiving scholarship	13
		% receiving scholarship	100.00
	XII	Number of Students	13
		No of Students receiving scholarship	09
		% receiving scholarship	69.23
(ii) Free Books	VI		2
	VI		16
	VII		08
	VIII		11
	IX		06
	X		12

The conditions reported for providing scholarship to SC and ST students are as follows:

1. Parents income should, not exceed Rs. 1000 per month.
2. The SC students continue to get scholarship even if they fail. Thus they get two chances in the same class ST students do not get this advantage.
3. It was also reported that the scholarship is stopped if one does not show satisfactory progress and good behaviour
4. Tuition fee is refundable in higher classes
5. Navodaya Vidyalayas, the newly opened free residential institutions by the Central Government (with reservation for SC and ST students) admit children in class VI on the basis of the Selection Test

Respondents were asked to mention whether they were satisfied with the available incentives to the SC and ST students. Their responses were as follows :

Satisfied/ Unsatisfied	No. of Respondents	Percentage
Satisfied	51	35.91
Unsatisfied	91	64.09

Those who were not satisfied, they were asked to give reasons for their dissatisfaction.

Only 28 respondents gave reasons for dissatisfaction. The reasons given by them are as follows :

Reasons for Dissatisfaction with the Available Incentives	Frequency
1 Amount of incentive is insufficient in the context of present cost of living	9
2. Scholarship is not disbursed in time	7
3 Harjan Welfare Department does not cooperate Sometime forms are not available Students and their parents have to visit their office number of times.	6
4 The middle men who disburse the scholarship take bribe	2
5. Only those persons who personally contact officers in Harjan Welfare Office get scholarship for their wards	2

The respondents were asked to comment whether the impact of the incentives is positive on

the educational progress of SC and ST students. Their response was as follows :

Response	Frequency	Percentage
Favourable Impact	77	54.22
Unfavourable Impact	65	45.78

Out of those who were not in favour of suitable impact of incentives on SC and ST students, 33 gave following clarifications in support of their response :

Clarification regarding unfavourable Impact	Frequency
1 Incentives have negligible impact on SC and ST students	17
2 SC and ST students come to school only to receive their scholarship.	12
3 Students getting scholarship become careless and unconcerned with their duties	02
4 Students do not utilize their scholarship properly	02
5. Parents misutilize the scholarship amount of their wards	02

The respondents were asked to suggest modifications in the existing incentive schemes for SC and ST students. An analysis of their responses is as follows :

Suggested Modifications	Frequency
1 Free uniform, books etc should be provided instead of cash awards.	34
2 Incentives should be provided on the basis of means test (poverty) to all concerned students and not on the basis of caste.	17
3 Amount of scholarship should be increased.	13

4. Scholarship should be awarded on the basis of merit only.	12
5 Scholarship should be given on the recommendation of and through the Headmaster.	08
6. Steps may be taken to check bribery in the concerned offices.	08
7. Additional provision of free books and stationery be made.	05
8. Incentive should be given/continued on the satisfactory progress of the students	05
9 Hostels may be arranged for the poor children of the villages	04
10. Procedure for awarding scholarship should be simplified.	03
11 Minimum income entitled for scholarship to wards may be increased from existing Rs. 1,000 per month to Rs 2000 per month	01
12 Scholarship should be given on the basis of a written test	01
13 A representative of the Harijan and Welfare Department should visit the schools to get the forms filled by the eligible students.	01

Name and addresses of the SC and ST persons who have positively been benefitted by the incentives received by them for education were invited. A few names given by the respondents are mentioned below :

1. Shri Mata Prasad, IAS (Basti).
2. Shri Daya Ram Rajak, Dy. S P., CRPF (Jhansi).
3. Shrimati Beni Bai, Ex-Minister, U.P
4. Shri Ravi Dutt, M.B.S. Student (Meerut)
5. Ms Jag Roshmi Devi, Police Department (Meerut).
6. Shri Amar Sneha, Writer, (Meerut)
7. Shri Suresh Chand Ujala, Hindi Officer, Information Deptt (Meerut)
8. Dr Manmohan Singh, M.B.S (Agra)

9. Shri Ram Shanker Dhanuk, Field Officer, LIC (Banda)
10. Shri Roop Singh, Assist. Engineer Agra.
11. Shri Radhey Lal, Sales Tax Officer, (Agra)
12. Shri Bal Krishna, S P. (Allahabad)
13. Km Vidya, D I G S (Varanasi)
14. Shri Ram Pyrae Paria, ex-MLA (Mirzapur)
15. Shri Durga Prasad Chowdhary, Financial Adviser, Transport Deptt (Mirzapur)
16. Shri Vijay Singh Pangu, Distt. A.E. Officer.
17. Shri Umendra Singh Tolia, Medical Officer, (Pithoragarh)
18. Dr. Indra Ram, Principal, Govt. College, (Paun)
19. Shri Mitra Lal, D.D.E.R (Pauri)
20. Shri Gopal Das, M.L.A (Paun)

Respondents were asked finally in the questionnaire to mention further suggestion regarding incentives to SC and ST students Their suggestion is given below :

Suggestion	Frequency
1. Free tutorship/remedial teaching be given to SC and ST students.	6
2. Special provision be made for their training in sports	2
3. Economically backward, but not interested in studies, should not be given scholarship.	2
4. These students may be given vocational training	2

5. Students in classes VI to VIII be provided incentives on the pattern as given to students in Classes IX to XII. 1
6. They may be taken on tours 1

Since the sample was not stratified and selected, certain aspects of this sort of study have been omitted, like the study of the Ashram type of residential schools, concerned students' own perspectives on these incentives, the suggestions of the SC and ST persons who are at present on responsible posts.

Although the format of the questionnaire was duly studied by the acknowledgeable persons before its finalisation, probably a little more labour, had the time permitted, by structuring the responses with the provision of alternatives on each item would have given the respondents some strain to think on guided lines. Instead it was thought proper to keep the responses free ended, thus providing the respondents an opportunity to give their 'own' views.

Conclusion

Although there is a publication by the RCE Ajmer on the education of the SC and ST population of Uttar Pradesh, which is based on the annual report published by the Department of Harijan and Social Welfare of this state, it was desirable to collect more information through questionnaire to provide a basis for deliberations for further workshops on this issue.

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(See Rule 8)

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I, K.J S. Chatrath, hereby declare that the particulars given above are true to the best of my knowledge and belief.

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राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्

NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

The Primary Teacher is a quarterly brought out by the National Council of Educational Research and Training (NCERT), New Delhi. The Journal intends to give to the practising teachers and concerned administrators, authentic information about the educational policies being decided on and pursued at the Central level. It aims at giving meaningful and relevant material for direct use in the classroom. It would carry announcements of programmes, courses of study, etc., offered at various centres in India from time to time. It also provides a forum for the discussion of contemporary issues in the field of education.

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Historical Background of Second Language

SUBHASHINI PASSI

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Once a society becomes self-conscious about schooling its young, the seed of educational theory is sown. What sort of teaching theory will command interest during a given period of history depends on what sort of learnings carry a premium in that period. There is a general belief among some people that history is an estimated description of the past and there is a possibility that this estimated past may encompass some components of truth, as well as lies. Such people also believe that historical evolution is not linear, therefore, the development of science and technology and other related aspects of the society resulted in sudden breakthroughs even in the area of language learning and teaching.

The invention of script, the discovery of paper, printing machines and word-processors have revolutionised the teaching and learning of languages. A hundred years ago no one could have believed and anticipated that there could be sophisticated language laboratories in times to come which would facilitate and increase the relevance of individualised learning.

Therefore, these people genuinely believe that any predictions in language teaching are likely to be tentative and could be false. Nevertheless, another group of people believe that evolution in language learning and teaching, as well as, in many other areas is always casual. Descriptions and explanations are possible. A serious effort to predict the language learning and teaching developments can provide

reasonably accurate predictions in the profession. Therefore, the situation is not as grave as a few people think it to be. What is required is a serious and well planned effort to study history of L2 for predicting changes in the profession.

When changes occur, complete or conclusive evidence is not always available in all the features of L2 teaching and we generally rely on partial or incomplete evidence. Where the evidence in favour of a proposition is partial or incomplete, the probability of the inference may be increased by additional evidence. However, generalisations enable us to arrive frequently at conclusions, which are true in proportion to the care with which our generalisation is formulated and tested. The

history of L2 teaching from Comenius to West may help us to show that a general consensus, or wide-spread and unquestioned feeling of certainty, does not preclude the possibility that the future may show us to be in error.

Inspired by Bath, Comenius, the greatest educationist of the 17th century produced a bilingual dictionary made up of 8000 or so Latin words arranged in simple sentences with matching vernacular translations in parallel columns. It included information on a wide variety of subjects. In Comenius, schooling took its cue from the conviction that not only the natural impulses and activities of children, but also the ordinary objects of daily life and the vernacular languages were the keys to good life and good society. So the concrete object, sense perception, usefulness in life, came to be recognised in his teaching especially, of languages.

Unlike Comenius who leaned heavily on the natural method of language teaching, Sweet provided a sound theoretical structure to the methodological practices of language teaching, smoothly blending into five principles, viz. sound associations, repetition, memory, coordination, and interrelatedness of language texts, and grammar teaching based on psychological theories and the science of linguistics.

Compared to Sweet, Jespersen took language teaching a step further by giving the prevalent theoretical structure of language, a sound teaching practice. Language, according to Jespersen had to be studied as a whole, in contexts and real life situations for effective communication. Traditional formal grammar thus, gave way to intentional grammar for the understanding of language in its totality. However, a common platform for language study for Sweet and Jespersen was 'language as communication'. In Jespersen's works one can clearly mark a headway towards the skills

of language, especially, those of speech and reading.

However, it was Palmer who successfully bridged the gulf between linguistic theory and teaching practice. Palmer's main interest rested in the selection and grading of vocabulary and intonation. His principles of methodology were like those of Sweet and Jespersen, built on linguistics, psychology and pedagogy. For him lexicon and grammar could not be separated from language learning. He further advocated the learning of language through direct contact and meaningful repetition.

Palmer's professional rival was West, who was against the total adoption of the 'direct method.' Advocating the supremacy of reading skill over the other language skills, he, in a way, joined hands with Jespersen and paved the way towards the 'reading method.'

It is true that we, as teachers may not be able to dispel the differences which exist among various schools of thought, yet we need to be eclectic in our approach, as far as teaching in a classroom situation is concerned. Knowledge of history of L2, therefore, helps a classroom teacher in various ways. Based on a sound knowledge of history of L2 the teacher develops an evolutionary perspective of various components of language—vocabulary, grammatical rules, concepts etc. Such a perspective provides him the meaningfulness of the existing laws of language learning and its teaching. Learning a foreign language in a school setting with the help of a classroom teacher is a process in which the learner normally starts from a natural zero point and proceeds to acquire a series of habits and response capabilities. There is a very close relationship between knowing how a pupil learns and the manipulable variables influencing learning, on the one hand, and knowing what to do to help him learn better on the other. It

is in such situations that the activity of teaching becomes meaningful, rational and significant to a classroom teacher. Contrary to this, if a teacher does not know the historical evolution of the different components and elements of language, his activities would be bizarre, haphazard and random. He would fail to develop faith and confidence in the field of language, teaching/learning and linguistics. A broad visionary teacher having an evolutionary understanding of L2 will be able to create a lasting impact in favour of language learning by his pupils.

The two schools of thought – revolutionary and evolutionary in the area of language teaching are not necessarily contradictory. Some aspects of language teaching are revolutionary, whereas, the others are evolutionary. Such a view will be known to a teacher who has a deep historical knowledge of L2 teaching over a long period of time. By way of example, such a teacher would appreciate the revolutionary changes transforming the conceptual understanding of language teaching varying from the Behaviourists to the Cognitivist to the Psycholinguistic schools of learning. Possessing a set of psychological principles, a resourceful teacher can take all relevant considerations into account, and, can improvise solutions to new problems instead of blindly following simple rules of the thumb. It is the knowledge of history of L2, and history of L2 alone that can provide a useful thesaurus

of the meaningful realistic problems persisting in language over a period of time, especially those which the experts of L2 are facing even today. Similarly, these teachers would appreciate and welcome the evolutionary developments in the script aspect of language learning and teaching or the bases of curriculum planning with its shift of emphasis from the linguistic approach to course design (which aims at taking the learner through successive stages of grammatical complexity of the language) to the situational approach (which seeks to meet the specific situational needs of the learner in the use of language) to the new communicative approach (setting out to teach almost everything to the learner of the target language).

We, therefore, conclude that it is a long road from the historical front to the classroom. Educationists, linguists and psychologists go back and forth between history and research on the one hand and the classroom on the other; and while they accelerate the rate of change, they affect its general course less than one might suppose. All said and done, the knowledge of history of L2 refers to guided or manipulated learning directed towards specific practical ends. These ends may be defined as long term acquisition of stable bodies of knowledge and of the capacities needed for acquiring such knowledge.

Relevance of Family Life Education

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A society consists of citizens of today, of tomorrow and of the day after. If they are to play a useful role in the society, they have to be properly prepared through the process of education which no longer means literacy or cognition alone. The term has a much wider connotation and should cover 'life' itself, both at the micro and macro levels. The individual in family is the most potent constituent of society and any fruitful education must strengthen this constituent. It is, therefore, rather sad that this institution has been undergoing a process of disintegration.

In India, this process has been confined mainly to the urban strata of society. The concept of family life in India does not stand as blurred as in the more materialistic societies. It is a good sign because we do not have to start from zero in the matter of re-strengthening family life. The old idea of the joint family life has little scope for independence or adventure or initiative and does not hold good any longer but most certainly, the fraternal feelings and mutual trust and regard have to be very much there.

Problems of Adjustment

"Child is the father of man" is an old saying but most certainly, there is a lot of truth behind these words. The child and the youth of today shall come to occupy important positions in the family and society tomorrow. They have to be prepared to play their roles well and effectively. They need to generate the knowledge

and awareness about what constitutes the "quality" and most certainly, both the school children and the out-of-school youth have to be covered in the necessary orientation. We must also recognise that the young people are experiencing discomfiting confusion, disquieting invitations and problems of adjustment as a result of rapid social change.

A new dimension has, therefore, to be added to the on-going educational process and content. Family life which is comparatively a new comer in the field of education, answers satisfactorily to our requirements of both parents and their wards. It should on one hand assist parents to play their part in a school-cum-home effort and the other help the young adjust to the vagaries of life.

The term "family life education" is certainly all comprehensive and includes areas

like education for living, education for personal development, population education, sex education and education for responsible parenthood. It is certainly an erroneous notion that family life education is another name and a cover up for family planning. The programme clearly identifies educational needs of young people to assist them in planning their role as family members and enjoy robust social health.

In the light of these goals, family life education may encompass the following elements :

- (a) *Health* : of the mother and child, family hygiene, nutrition, environmental health.
- (b) *Psychological* : relationship between husband and wife, parents and children (affection and love and sympathy).
- (c) *Social* : role of family members and changing family structure.
- (d) *Civil* : constitution of family and community life, preparing young people for civil responsibilities, citizenships.
- (e) *Moral* : duties of parents in respect of children and of children in respect of parents.
- (f) *Culture* : religious, traditions and customs.
- (g) *Economic* : family planning, family income and budgeting.
- (h) *Welfare* : effective use of time, relationship of family to working life.
- (i) *Legal* : family laws, laws of inheritance, social laws.
- (j) *Marriage and sexuality* – reproduction.

Although sex is included indirectly, there is certainly no harm in properly orienting the adult about sexuality including sexual functions and ethics. Many seminars held in differ-

ent parts of the world including third world countries, have affirmed the great necessity of integrating sex education with the adult education process, stress has been laid on the recognition of healthy sex as the basis of healthy family life. Ignorance about sex is, in universal opinion, the main cause of growing promiscuity. We have to guard against the ills of a permissive society. Nothing should be held back at this stage. In fact, sex education provides a strong base for social and healthy development.

The question of introducing family life education, therefore, is very important. There can be no hard and fast approaches. The following approaches are more generally recognised :

- Integrating the necessary orientation in the existing subjects although it may be useful to have a staff member as a co-ordinator.
- All the stages, right from the nursery should be covered and content adjusted according to the stage of child development.
- Family life education may be taught jointly to boys and girls. Separate treatment at the early stages may encourage wrong notions and unhealthy consciousness.
- Family life education should be included in the pre-service and in-service education of the teachers of all stages in a big way.
- When there is no official effort, parent-teacher associations should be involved in the development of such programmes at local levels.
- Family life education should be evaluated through informal feedback from parents and through opinion surveys among students, teachers and parents.

- Non-formal media could be put to greater use to strengthen such programmes.
- There should be close collaboration between educational and family planning agencies and associations both at the official and non-official levels.

There is a great urgency to introduce family life education. The teacher is charged with great responsibility. Teachers themselves are parents or prospective parents and as such they should first convince themselves of the utility of new dimensions and bring about a freshness in their methods of communication. Routine treatment as an examination subject will kill the very soul of new orientation.

For the out-of-school youth, special non-formal educational programmes may be taken

in hand as a part and parcel of on-going programme of social education. The recently launched National Adult Education Programme can come very handy to reach the rural population and slum areas.

Being a massive programme, the role of voluntary agencies comes very vital in spreading universal consciousness through extension education methods. It is, however, necessary that there should be a concerted effort. Sporadic attempts here and there will not solve the problem. The politician, decision makers, administrators, teachers and the lay citizens, all have to work in the same direction, not cutting at each other but co-operating with each other. No cause can be greater and nobler than helping the young grow to a healthier maturity.

Playway Science Activities for Lower Primary Students

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Science can be best learnt through doing. For making science instruction effective, students must be provided hands-on experiences in science and more so at the primary level. This can easily be done with the help of inexpensive materials easily available in the immediate environment of the child. The materials like papers, straws, tin cans, balloons, etc. can be used for science activities for the lower primary classes. Science for the lower primary children is mainly concerned with gathering meaningful experiences. There is no denying that exploration and discovery are essence of science. Moreover, the work that is connected with exploration and fun will be of great interest for children. The child's learning acts become a great adventure if his classroom activities are based on the concepts of experimentation.

The discarded material and inexpensive things can be suitably used to the best advantage for children of 5 to 8 years of age. The material handling should involve hand work and learning skill which should lead to co-ordination between the mind and hand. The direct experiences of this kind evoke questions and deeper inquiries. The questions asked by children lead to further investigations and activities. More-

over, experiences both indoors and outdoors make children learn things like counting, measuring, timing, estimating, predicting, constructing, observing and modelling etc. All these activities have a great educational value.

Some simple activities which children pursue using paper, straw and rubber bands are listed below :

Sr. No.	Activity	Concept
1.	Paper air screw	Wind can do work
2.	Falling of paper	Air resistance

Sr. No.	Activity	Concept
3.	Pulling of a paper placed beneath a bottle	Inertia of rest
4.	Paper air craft	Air uplift
5.	Paper wind mill	Wind can do work
6.	Paper electrostatic needle	Charged body attracts light things
7.	Straw saxophone model	Sound is produced by vibrating body
8.	Straw electrostatic model	Like charges repel
9.	Straw pressure gauge	Pressure can straighten bent things
10.	Straw clapping sound	Sound is produced by striking an object.
11.	Straw C.G. toy	Lowering C.G. means stability
12.	Rubber band gun	Stretched rubber can do work
13.	Cloth clip projectile	Range of projectile depends on angle.

Rationale

The lower primary education has a great significance in the child's physical, social and intellectual development. Science education in

the early age of the child should be properly planned to include the playful activities. The activities should be such that they should influence the physical and mental characteristics of the child.

Evaluation Proforma for Oratorical Contest

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Oratorical talent is a human resource indispensable for leadership in democracy and in diplomacy. It must be spotted early, cultivated systematically and utilised properly. While spotting oratorical talent potential, care must be exercised to discriminate between bonafide talent and spurious demagoguery. A bonafide orator bases himself on sound knowledge, deep reflection and genuine conviction. He has at once a wide and lasting appeal. Dr. Radhakrishnan was a bonafide orator. Adolph Hitler was a dangerous demagogue whose speeches inflamed Germany to wage a war against the whole world. Spurious demagoguery will whip up mass hysteria by its melodrama and unscrupulously harness the consequent emotional upheavals to destructive purposes.

Knowledge and reason by themselves do not appeal to a large population, however discerning and educated it may be. That is why American Presidential candidates, even those who are innately charismatic, are said to enlist the services of media men, and willingly rehearse and execute with precision the gesture they prescribe in their election telecasts.

Oratorical contests aim at spotting the talent potential in younger generation. Evaluating the candidates in these contests is a delicate, difficult and even dangerous task in the context of necessity for discriminating against demagoguery. Judges in most of these contests are eminent men and women who can intuitively tell the spurious from the genuine. Usually there is

near unanimity in ranking the candidates among the panel of judges. But, sometimes there arises a tie between the top two candidates. On such occasions, there are passionate and protracted discussions among the judges as to who deserves the first position. Eventually, inconclusive rounds of discussions give way to unsatisfactory compromises. The crux of the controversy as a rule happens to be around the general, i.e. overall impression of the candidates rather than any specific content or criteria pertaining to their performance.

Such stalemates in oratorical contests can be avoided by using the proforma given below. The proforma specifies in advance the criteria on which the contestants are to be assessed.

EVALUATION PROFORMA FOR ORATORICAL CONTESTS

Sl. No.	Name of the Candidates	Content 10		Reasoning 10	Expression 10		Style 10		Viva-voice 10		Total 50
		5 Informa- tion	5 Diction		5 Voice Modula- tion	5 Gestures	5 Poise	5 Rapport (with audience)	5 Question 1	5 Question 2	
1											
2											
3											
4											
5											
6											

Signature of the Judge

The guiding objective for the design of the proforma was to select, structure and explicitly focus on a compact set of criteria derived from three relevant sources - literature on rhetoric and oratory, research and development in performance evaluation and field experience. "Halo effect" - the unwitting carry over of the weightage on one criterion to the rest was the parameter to be reckoned with. The constraints that were borne in mind while designing the proforma were the span of attention and the span of retention in performance evaluation.

The validity of this evaluation tool has been empirically confirmed on the following second order criteria :

1. *The independent variability of different criteria* : There must be differences in the marks that the candidate obtains on the different criteria. If many candidates get exactly equal marks on all criteria, then they suffer from redundancy.
2. *The discriminative power of criteria* : Since the cream of the contestants is filtered upwards for final competitions, the differences among them, especially, between those who eventually settle in adjacent ranks will often be too small to detect by means of any one simple criterion. So, the criteria must help in recalling and reviewing their performance in the event of a discussion among the judges to resolve a tie between two contestants for the same rank.

An earlier proforma with focus on the person, the process and the product was found to be decidedly inadequate. Though the three criteria were conceptually distinct, their structure/sequence did not control "halo effect". Of course, the ultimate touchstones are the general concurrence of a sufficiently large audience with the rating and ranking on this

proforma and the contestant's future career as orators.

The proforma has five columns and the maximum of 50 marks per candidate are equally distributed among them. Thus, 10 marks are allotted for each major criteria.

The first column is content, content of the speech. The content of the speech can be best judged for its contribution to rhetoric force in terms of two subcriteria namely, information and diction. Information must be accurate and relevant diction connotes here, both choice of words and syntax. Each sub-criterion is assigned 5 marks.

Reasoning is the way the contestant marshals accurate and relevant information found in the content of the speech into a convincing argument in favour of the proposition he is canvassing. There are two directions in which reasoning can occur namely, induction (generalisation) and deduction (inference). However, the use of either or both of them depends upon the initial often unstated assumptions of the orator. Hence, the use of both modes in equal degree cannot be anticipated from every contestant. Therefore, the ten marks assigned for this criterion are not explicitly distributed between the two modes. Nevertheless, a good rhetorical performance will involve a balanced and judicious use of both the modes as per the unstated assumptions and the factual content.

Expression is the third criterion. It has been analysed into two sub-criteria namely voice modulation and gestures. Each of them is assigned a maximum of 5 marks. Whereas content and reasoning together constitute the cognitive dimension in the presentation, expression pertains to the affective dimension. The success of an oration is a function of the smooth synthesis that an orator achieves between reason and feelings.

Some judges are of the opinion that a margin must be provided for assigning "intuitive" weightage to a "successful" orator since his performance does not readily lend itself to analytical approaches of assessment. This margin went under the rubric of general impression. Now-a-days it has been refined into style. Style can be further analysed into poise and rapport with the audience. Such an analytical approach even to a generic criterion like style minimises the incidence of "halo effect", the unwitting carry over of weightage from the one constituent sub-criterion to the

other, each of which is severally relevant to the success of the oration, is independently variable and thus can enable the judges to discriminate objectively between contestants who are otherwise equal. The ten marks are assigned equally between the two sub-criteria.

Finally, the fifth column, *viva voce* is there as a measure of abundant precaution against tutored and simulated spontaneity passing off as real originality. The idea of a *viva voce*, it must be acknowledged here, has been adopted from the "talk your way to USA" contest organised by Air India.

Delinquency among Adolescents

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Adolescents are the greatest national resources of any country. They have to bring general happiness to the public and have to contribute their mite to the general welfare of the nation. If they become wasteful and destructive, they damage and weaken their nation. So it is our duty to bring up the adolescents of the nation in a healthy way. However in any society, there are factors which cause damage to younger generation, expressed in various behavioural problems termed as delinquency.

The word delinquency is derived from Latin word 'delinquere' which means neglect and it may be interpreted in broad terms as neglect on the part of juveniles to conform to the accepted standards of behaviour in their society. Delinquency denotes acts of varying degrees of social consequence from mere naughtiness to major assault punishable by law.

The report of the sixth United Nations Congress on the prevention of crime and treatment of offenders points out 'while by and large delinquency continues to project traditional pattern, there are certain new trends and dimensions of the problem such as student indiscipline, mass copying in examinations, ticketless travelling, vandalism, riots etc. which are rather unprecedented in character.'

Delinquency is not mere abstraction but something real, which is part of the social life of the people. As such, it can not be treated

lightly nor can it be neglected. It is a living problem which if allowed to develop unchecked today, may sip the very vitality of the nation tomorrow. If the future society is to be planned, the problem has to be scientifically tackled now.

In school, delinquency not only creates problem to the teachers but also they violate the school environment. It is clear from various evidences that the source of youthful power is not properly tapped for social, civil, cultural and economic betterment. So, the problem of delinquency has become such an important issue that no conscious parent or teacher can ignore it. The delinquent, is not to be punished but he is to be treated carefully so as to reform and rehabilitate him. No other problem concerning human behaviour has been discussed and written about so often than this problem

and yet, so little is known about its etiology. Etiology is significant because the problem is half solved. Since independence, the number of delinquents is constantly increasing. If it is unchecked, their number will keep increasing and will become detrimental to the national progress. The present study is an attempt to find out some familial causes of delinquency with reference to Karnataka state :

Variables In this study, the task of the investigator was to measure scientifically the extent to which the following familial variables are related to delinquency

- Mother's aggression towards subject
- Father's aggression towards subject
- Subject's aggression towards mother
- Subject's aggression towards father
- Mother's aggression towards father
- Father's aggression towards mother
- Mother's competence
- Mother's affection
- Mother's strictness
- Mother's identification
- Mother's indulgence
- Mother's denial
- Father's competence
- Father's affection
- Father's strictness
- Father's identification
- Father's indulgence
- Father's denial.

Hypotheses The following hypotheses involving familial variables were advanced for the study.

1. Normal adolescents and institutionalised adolescent delinquents do not differ in parent's aggression and subject's aggression
2. Normal adolescents and institutionalised adolescent delinquents do not differ in parents-competence, affection, strictness, identification, indulgence and denial.

Tools of study The following tools were used for the study.

- 1 *Personal Bio-data Form* Personal bio-data of informants was known by personal bio-data form prepared by the investigator
- 2 *Raven's Standard Progressive Matrices* Mental ability (non-verbal intelligence) was measured by Raven's standard progressive matrices. The test was prepared by J.C Raven, J.H Court and J. Raven.
- 3 *Indian Adaptation of Clark's Parent-child Relations Test* : Eighteen variables of parent-child relations were measured by Indian adaptation of Clark's parent-child relations test, standardised to Indian context by Dr. Govind Tiwari. It was translated into Kannada by the investigator with the help of experts.

Sample : Sample of the study involves institutionalised delinquent adolescents and normal adolescents. The age range of the sample was 13 through 18 years of both sex.

Institutionalised Delinquent Adolescents :

The sample of institutionalised delinquent adolescents consists of all delinquents residing in senior certified schools of Karnataka-Bangalore, Bellary, Bijapur, Devangere, Gulbarga, Hubli, Mysore, Khanapur and Udupi. They were admitted to certified schools due to

various reasons – neglected, begging, truancy, uncontrollable and theft, etc; for which juvenile courts found them guilty. But, they were studying in local high schools with special permission from their respective institutions.

The sample of 180 institutionalised delinquent adolescents consists of 40 male and 20 female students from each standard of VIII, IX, and X respectively.

Normal Adolescents :

The sample of normal adolescents got by purposive sampling. According to the rating of school teachers' and to investigators' best knowledge all of them were normal in their behaviour without any tinge of delinquent behaviour. These normal adolescents were chosen from practice teaching schools of Srisaile college of education, Harihar. The sample of 180 selected normal adolescents consists of 40 male and 20 female students from each standard of VIII, IX and X respectively. One to one matching was done between institutionalised delinquent adolescents and selected normal adolescents on the following variables : sex, age, mother-tongue, educational failure, ordinal position, income (got by filled personal bio-data of informants) and intelligence (got by Raven's standard progressive matrices).

The investigator personally administered tests to the total sample of 360 high school students. Answer sheets were collected back on the spot.

Analysis and Interpretation

After collecting the required data, differential analysis was used to find out whether two groups differ in the variable selected for the study. Differences in the scores of parent-child relations, following 8 scales are not significant :

- Mother's aggression towards subject
- Subject's aggression towards mother
- Mother's affection
- Mother's strictness
- Father's strictness
- Mother's identification
- Mother's indulgence
- Father's indulgence

Among 18 scales of parent-child relations, 10 scales are significant which are being discussed below.

TABLE

Showing Significance of Difference in Second Scale of Parent-child Relations between Normal Adolescents and Delinquent Adolescents

Group	N	Mean	S.D.
1 Normal adolescents	180	53.6055	26.6664
2. Delinquent adolescents	180	61.8055	27.2978

$t = 2.89$ which is significant at .01 level

Inference of table reveals existence of significant difference in second scale of parent-child relations in the means scores of normal adolescents and delinquent adolescents. Mean score of second scale for normal adolescents (= 53.6055) is less than that for delinquent adolescents (=61.8055). Thus delinquent

adolescents had father's aggression often than that of normal adolescents.

This indicates that father of delinquent adolescent was often bad tempered, domineering, critical towards the subject and probably hurt feelings than that of normal adolescent.

TABLE

Showing Significance of Difference in Fourth Scale of Parent-child Relations between Normal Adolescents and Delinquent Adolescents

Group	N	Mean	S D
1 Normal adolescents	180	40.9893	25.2919
2 Delinquent adolescents	180	51.5166	27.8127

$t = 3.762$ which is significant at 01 level

Inference of the table reveals existence of significant difference in the fourth scale of parent-child relations in the means scores of normal adolescents and delinquent adolescents. Means score of fourth scale for normal adolescents (=40.9893) is less than that for delinquent adolescents (=51.5166). Thus,

delinquent adolescent had often aggression towards father than that of normal adolescent.

This indicates that delinquent adolescent was often argumentative and verbally hostile towards father and probably disliked father than that of normal adolescent.

TABLE

Showing Significance of Difference in Fifth Scale of Parent-child Relations between Normal Adolescents and Delinquent Adolescents

Group	N	Mean	S D
1 Normal adolescents	180	40.5500	22.7036
2 Delinquent adolescents	180	52.5111	21.6086

$t = 5.120$ which is significant at 01 level

Inference of the table reveals existence of significant difference in the fifth scale of parent-child relations in the mean scores of normal adolescents and institutionalised delinquent

adolescents. Mean score of fifth scale of normal adolescents (40.5500) is less than that for institutionalised delinquent adolescents (52.5111). Thus, delinquent adolescents had

often mother's aggression towards father than that of normal adolescents.

This indicates that mother of delinquent

adolescent was often domineering, bad tempered, and disrespectful towards father and probably criticised him than that of normal adolescent.

TABLE

Showing Significance of Difference in Sixth Scale of Parent-child Relations between Normal Adolescents and Delinquent Adolescents

Group	N	Mean	S.D
1. Normal adolescents	180	43.5722	24.9087
2. Delinquent adolescents	180	63.5944	21.8004

$t = 8.116$ which is significant at 01 level

Inference of the table shows existence of significant difference in Sixth scale of parent-child relations. Mean scores of sixth scale for normal adolescents (43.5722) is less than that for delinquent adolescents (63.5944). Thus, delinquent adolescent had often father's aggression towards mother than that of normal

adolescents.

This indicates that father of delinquent adolescent was often domineering, bad tempered and disrespectful towards mother and probably criticised her often than that of normal adolescents.

TABLE

Showing Significance of Difference in Seventh Scale of Parent-child Relations between Normal Adolescents and Delinquent Adolescents

Group	N	Mean	S.D
1. Normal adolescents	180	53.5222	22.5616
2. Delinquent adolescents	180	42.9166	21.8237

$t = 4.532$ which is significant at 01 level

Inference of the table reveals existence of significant difference in the seventh scale of parent-child relations in the mean scores of normal adolescents and delinquent adolescents mean score of seventh scale for normal adolescents (53.522) is more than that for delinquent adolescents (42.9166)

Thus, delinquent adolescents had less mother's competence than that of normal adolescents

This indicates that mother of delinquent adolescent was less sociable, intelligent, efficient, reasonable and successful in life than that of normal adolescents

TABLE

Showing Significance of Difference in Eighth Scale of Parent-child Relations between Normal Adolescents and Delinquent Adolescents

Group	N	Mean	S.D
1. Normal adolescents	180	62.2500	25.9593
2. Delinquent adolescents	180	48.6555	24.5004

$t = 5.114$ which is significant at .01 level

Inference of the table reveals existence of significant difference in the eighth scale of parent-child relations in the mean scores of normal adolescents and delinquent adolescents. Mean score of eighth scale for normal adolescents (=62.2500) is more than that for delinquent adolescents (=48.6555). Thus,

delinquent adolescent had less father's competence than that of normal adolescents.

This indicates that father of delinquent adolescent was less-sociable, intelligent, efficient, reasonable and successful in life than that of normal adolescent.

TABLE

Showing Significance of Difference in Tenth Scale of Parent-child Relations between Normal Adolescents and Delinquent Adolescents

Group	N	Mean	S.D.
1. Normal adolescents	180	62.6388	22.1379
2. Delinquent adolescents	180	43.6611	23.7188

$t = 5.781$ which is significant at .01 level

Inference of the table reveals existence of significant difference in the tenth scale of parent-child relations in the mean scores of normal adolescents and delinquent adolescents. Mean score of tenth scale for normal adolescents (62.6388) is more than that for delinquent adolescents (43.6611). Thus,

delinquent adolescents had less father's affection than that of normal adolescents.

This indicates that father of delinquent adolescent was generally less – sympathetic, tender hearted, attentive and affectionate towards the subject than that of normal adolescent.

TABLE

Showing Significance of Difference in Fourteenth Scale of Parent-child Relations between Normal Adolescents and Delinquent Adolescents

Group	N	Mean	S D
1. Normal adolescents	180	52.1222	35.3145
2. Delinquent adolescents	180	37.9944	32.7860

$t = 3.935$ which is significant at .01 level

Inference of the table reveals existence of significant difference in the fourteenth scale of parent-child relations in the mean scores of normal adolescents and delinquent adolescents. Mean score of fourteenth scale for normal adolescents (= 52.1222) is more than that for

delinquent adolescents (= 37.9944). Thus, delinquent adolescents had less father's identification than that of normal adolescents. This indicates that delinquent adolescent had less admiration, pleasing relations, wish to be similar to him.

TABLE

Showing Significance of Difference in Seventeenth Scale of Parent-child Relations between Normal Adolescents and Delinquent Adolescents

Group	N	Mean	S D
1. Normal adolescents	180	17.4833	13.0206
2. Delinquent adolescents	180	22.3388	17.8238

$t = 2.954$ which is significant at .01 level

Inference of the table reveals significant difference in seventeenth scale of parent-child relations in the mean scores of normal adolescents and delinquent adolescents. Mean score of seventeenth scale for normal adolescents (= 17.4833) is less than that for delinquent adolescents (= 22.3388). Thus,

delinquent adolescents had denial (mother) than that of normal adolescents.

This indicates that delinquent adolescent shows defensiveness in describing the relationship with mother and unwilling to acknowledge mother's un-favourable characteristics than that of normal adolescent

TABLE

Showing Significance of Difference in Eighteenth Scale of Parent-child Relations between Normal Adolescents and Delinquent Adolescents

Group	N	Mean	S.D.
1. Normal adolescents	180	20.8555	17.8238
2. Delinquent adolescents	180	25.4277	18.0520

$t =$ which is significant at .01 level

Inference of the table 10 reveals significant difference in eighteenth scale of parent-child relations in the mean scores of normal adolescents and delinquent adolescents. Mean score of eighteenth scale for normal adolescents (= 20.8555) is less than that for delinquent adolescents. Thus, delinquent adolescents had denial (father) than that of normal adolescents.

This indicates that delinquent adolescent showed often defensiveness in describing the relationship with father and unwilling to acknowledge father's unfavourable characteristics.

SUGGESTIONS

Congenial Home Conditions

Since the delinquency is rooted in defective, unwholesome and inadequate parent-child relations, the first and foremost task is to improve the family on its social and moral side. The parents must breed and cultivate higher social and moral character, develop mutual forbearance, exercise a decent control and maintain proper discipline among the various members.

The husband and wife relationship calls for special attention. Wife must respect her husband. Wife must try to keep her husband in comfort and happiness. On the other hand husband must change the traditional attitude towards wife.

When one looks back at the relationship between parents and children, there is also an urgent need for change in the parental control

and treatment. The parents should not be excessively harsh, absolutely unsympathetic and awfully cruel towards their children. They should not at the same time allow their children to go out of control. They must understand the peculiar significance and handicaps of adolescence and must help and encourage to develop their own personality.

The duty of the parents is to provide their child with need satisfaction by creating conducive emotional climate in home for the healthy personality development. This climate is the product of cordial relationship between the two parents. The personal adjustment of one parent to the other determines the general atmosphere of home. In addition, the fulfilling of the physical needs of their child by providing food, clothing and a shelter are also important. Psychological needs – affection, security, belongingness and praise are to be satisfied. Suitable self models for behaviour are to be provided. Anyhow, satisfying parent-child relations are one of the greatest safeguards against delinquent behaviour.

Organisation of Personal Guidance Programme

It is the duty of the school to help children to solve personal problems like – family relations, personality, etc.

Mass Media

Child rearing practices are to be imparted to the adults through mass media like newspaper, radio, television, etc. They can also be used to develop children in the desired direction.

A to Z of Effective Teaching

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Quest for effective teaching is as old as teaching itself. During the last few decades, research on effective teaching has yielded guidelines for teachers. These guidelines are summarised in this write-up. How many of these principles are already present in teaching? Are there some areas in which you would like to improve? It is the need for the teachers to try and make their teaching effective.

'A' is for Alertness . For effective teaching, the teacher is to be alert to intellectual and emotional needs of children. He is alert about what is happening in the classroom. Are all children on task? Are they working for set objectives? Is any one drifting away? Is someone involved in disruptive behaviour? Alert teacher keeps all activities and behaviours of learners within the fold of his view. Alertness leads to appropriate decision and timely corrective action.

'B' is for Business like : To make teaching effective, classroom is organised as a busy place keeping everyone on task. The children should perceive the teacher and his/her action meaning business. The activities and behaviour of all is business like. Everyone is busy in realizing the goals set for the individual as well as for the group. Clear directions and the competence to inspire children to follow directions contribute to effectiveness of teachers.

'C' is for Cooperative Learning . Our culture over-stresses individual needs degenerating into selfishness. Indians are excellent individual achievers but flop in team work. Cooperative learning in pairs, small groups and large groups provide opportunity for shared goals, meaningful interactions and enriched experiences. The decisions are taken together, resources are shared, and the competencies to lead and be led are developed. Cooperative learning situations are, therefore, designed during teaching.

'D' is for Discovery : In effective teaching children are guided to discovery of new ideas and solution to problems. The children formulate problems, identify information to be collected alongwith sources of information, collect information, draw inferences and discuss solutions. It helps children in becoming independent and resourceful learners.

'E' is for Expectancies : Expect children to succeed in learning. Achievement of children

is related to teacher expectancies. Teacher and child energy inputs in the learning-teaching process depend on these expectancies.

'F' is for Feedback : Provide immediate feedback to children on their learning process and performance in a non-threatening manner. It helps them to keep on task and take timely corrective action to ensure completion of the assigned task.

'G' is for Goal-Setting : Set goal(s) for learning. The children need to be involved in goal setting. It is necessary that the children also know well what they are expected to strive for and achieve as a result of the learning task.

'H' is for Humour The teaching should be punctuated by a sense of humour. It releases tension and relieves fatigue in children. Naturally, the children are on task with renewed energy. There is evidence to the fact that achievement is better when learning is perceived as a fun comprising pleasant experiences. There is little evidence to the contrary.

'I' is for Involvement . Involve children in all activities of teaching learning right from goal setting, through choosing learning experiences, participation in activities, and monitoring progress for evaluation. The sense of involvement motivates and sustains motivation of all children.

'J' is for Journal . Keep journal of teaching. It contains an account of critical incidents relating to teaching. What worked well ? What did not work well in a particular situation ? What lesson can be drawn from the day's teaching experience ? How can this be utilised to improve teaching tomorrow ? Introspection and action helps

'K' is for Know : Know the children well. Nature of the child-his learning style, potentials and limitations, likes and dislikes are useful for selecting learning experiences. Know special needs of children, if any. Know ecology of the child, the home and community environment.

Such information is helpful in matching teaching style and learning activities to child needs.

'L' is for Link : Establish learning links. Link new learning to the previous learning to make the former meaningful. Link learning sub-tasks and different learning experiences to the goal set for the group as well as the individual. Also link new learning to experiences beyond by way of reflection about its implications for new situations. It helps in assimilation of the learning.

'M' is for Motivation : Motivation releases energy for the learning task. Motivate children through raising curiosity and their involvement in selecting learning goals, structuring learning environment, selecting learning experience and monitoring progress. Sustain motivation through appropriate use of praise and other means of recognition.

'N' is for Need : Teaching should be responsive to child needs. Even, content is also to be made relevant to his needs through carefully planned curriculum and teaching. Curriculum needs and individual needs of the child are to be harmonised for ensuring success in learning.

'O' is for Out-of-Classroom . Out-of-classroom learning experiences are as important as classroom activities. Organise field experiences outside the classroom, in the school and in the community outside the school. These experiences are important for functional learning and its application to life situations.

'P' is for Praise . Praise children for their achievement and success. Verbal and non-verbal praise can be used. Praise children for both individual and group performance. Individual praise can be both public and private. Praise for group performance is mostly public.

'Q' is for Quiz : Organise quiz for monitoring learning progress, review and sustenance of interest in learning. The quiz should provide the success experience and challenge children to learn more.

'R' is for Review and Practice : Review progress of the child and group in cooperative learning. The information is used for identifying areas where child needs more work. It also provides indication about the need for more practice for mastery. Modify learning experiences to these needs.

'S' is for Success Experience : Success breeds success. It motivates the learner to achieve more. It draws more energy for an involvement in the learning task. The teaching should be so organised that children have success experience. Start from what the child can do and increase difficulty level of the learning task.

'T' is for Tutoring : Some children do need tutoring. For removing learning difficulties and achieving mastery, tutoring in the classroom is indispensable. In large size classes, the teachers have limited time for this. The teachers can organise peer tutoring. The children who learn faster are good resource in the classroom. Their involvement in peer tutoring help both the tutor as well as the tutee.

'U' is for Unexpected Encounters : Teaching is a social activity involving human behaviour. The process does not always follow the predicted course despite careful planning. It is a challenge as well as an opportunity for the teacher to demonstrate his managerial skill. Be prepared for such unexpected encounters making these productive learning experiences rather than disruptive episodes. Respond constructively.

'V' is for Variation . To secure and sustain attention of children on the learning task and keep them interested and involved, it is essential to provide a variety of learning experiences. There should be variety of activities to choose from. There should be variation in the presentation mode as well. The use of audio-visual aids helps in providing variation in

presentation. The organisational variation providing individual learning activity, paired learning activities, small group work and large group work keep attention, interest and involvement of children in the learning task. The transition from one learning activity to the other is to be smooth for effective teaching.

'W' is for Warmth : Teacher's warmth contributes to productive socio-emotional classroom climate. The teacher accepts feelings and establishes emotional bond with children. He creates supportive climate in the classroom. Mutual trust in the classroom improves involvement of all and draws the best of everyone in completing the learning tasks.

'X' is for X-ray of Learning Process : Effective teaching requires continuous X-raying of the learning process accompanied by corrective action. Is the activity taken as intended ? Is each child involved ? Are the interests and involvement of the learners sustained? Is it the time to change the learning activity or even the learning task ? The sensitivity and alertness of teachers to signals in the classroom help him to take timely corrective actions.

'Y' is for You . You are the most important person in teaching. You design learning experiences. You create the learning environment. You are the manager of learning. Be eager to prove your worth for the challenging task of effective teaching

'Z' is for Zeal : Teacher's zeal and enthusiasm are carried to the learner zeal and enthusiasm to complete the learning task and achieve excellence. Demonstrate your zeal and enthusiasm in every action of teaching.

Introspect on your teaching, how many of these principles are already present in teaching? Are some areas in which you would like to improve ? Try and make your teaching effective.

Need of Special Education

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It has been said that, as a nation, we are suffering from value sickness. India is experiencing a dearth of leaders of high moral character and sound national outlook who would work in different areas of nation's activities such as Economics, Industry, Agriculture, Education, Science, Administration, Technology and Defence. This dearth of leaders is not just a temporary phase but is a need of all the times. Gifted are the main source of making available to our country the needed leadership talent. Every rising generation of gifted is an invaluable treasure to be realized by the nation.

Giftedness includes remarkable performance, high measure of competency, superior intellectual ability, high mental age, cognitive superiority, production of ideational fluency and contribution to the welfare of the society. Special education means specially designed instructions which meet the unique needs of an exceptional child. The gifted needs special care and attention in order that his/her talents may blossom fully.

It is a matter of curiosity even to a common man as to know, what do children who are considered to be gifted at their school age do in their future life ? Are they able to fulfil the expectations of their parents and teachers ? But what we actually expect from them must be illustrated. Gifted are the prime movers for the complex society of the future. They are the most potent resources. Democratic country like

India cannot thrive on the suppression of talent, but on the contrary, its progress in various fields depends on the proper education of the gifted children. Society has a need for a good leadership in all fields. This will lead to improvement of economic condition, promotion of social welfare and international understanding. Therefore, the society needs inventors, innovators, administrators and statesmen.

All the members of the American Association for Gifted Children agree on emphasizing the necessity for developing in gifted children an awareness of their responsibility not only to develop their gifts fully, but also to use their abilities constructively in the interests of democracy. Wider recognition and greater conservation of the gifted should lead to the emergence of more capable leaders

in all the fields including art, music, education, government and science.

The report of the Education Commission (1964-66) is in favour of the above thinking. "A dearth of competent and trained manpower is now felt in nearly every branch of national life and is probably one of the biggest bottlenecks to progress. Poor as we are financially, the poverty of the trained intellect is still greater.

Expectations from the gifted are very high. But how can these be fulfilled unless we create the most challenging and fruitful learning situation for them? Unless and until we realize that proper care of gifted would turn out to be a wise investment in our collective future, there is no use of high expectations.

Present Position

The gifted children in our schools have not been challenged to exert themselves to their fullest capacity, instead they are neglected. Being competent and resourceful, they are known by teachers, to be able to take care of themselves. The talented as our future leaders, says Passow, will come to nearest to the ideal of benefiting mankind only if we present them with the kinds of educational experiences which stimulate democratic attitude, tolerance and sensitivity to problems of their fellowmen and self understanding.

The national survey by the Commissioner of the U.S. Office of Education revealed that educational provisions for the gifted and talented hold very low priority at all levels of government (Maland, 1972) while marginal support is provided in some sections of the country, the needs of most talented youth are unrecognized.

Only 52,269 gifted pupils in 1958, in all of the United States were in special education at

the combined elementary and secondary school level, when the total enrollment approximated 42 million. A three percent prevalence estimate for the gifted would yield 1,260,000 such students in need of special education, and therefore, approximately four percent were served.

Federal reports indicate that current provisions for gifted students, relative to special education for the handicapped are meagre. The expenditures for the gifted in twenty seven model school systems are low. The intellectually gifted are allotted only a small fraction of the amount allotted to the mentally retarded and other groups of handicapped children. Another indication of the small amount of attention to the gifted is found in the space allotted to this topic in publications. For example, in the volume on 'Special education, the Handicapped and the Gifted', more than five hundred and fifteen pages were devoted to the handicapped while only thirteen pages were given over to the gifted pupils.

It is easy to find sympathy for the handicapped. But it is very difficult to elicit sympathy for the gifted and next to impossible to arrange sustained public support for education that meet their needs.

Toeffler in his book 'The Third Wave', had stressed on the education away from the watertight compartments of the class-room to involvement with the community. As per his opinion, students should collect educational experiences collectively. In short, Toeffler wants to add a practical dimension to education that is surely lacking today. In our educational system, there should be more opportunities for self activity, self creativity, and self expression so that talent may blossom to its full.

What happens in India is pointed out by C.L. Bhatt. A developing democracy often

makes the mistake of concentrating on the expansion of education alone and providing equal opportunities to all. But the term equal often loses its true connotation in practice. It often turns out to be similar or even identical opportunities for all, ignoring the scientifically established facts about individual differences, e.g. backward and gifted. The needs of the backward children in India have atleast been recognized though not satisfactorily provided for, but the gifted often grow even without being noticed. This results into a huge National waste of talent. Present position is described in Kothari Commission (1964-66) as follows.

A good deal of potential talent never enters the school. At the primary stage, the proportion of children not enrolled varies from ten to sixty percent in different areas. Even among those who enter, about forty percent are eliminated in class I itself and only about twenty five percent belonging to about the top twenty percent of the families in society complete primary education. Secondary education is largely a privilege of the top ten percent of the families and higher education of the top five percent.

Even the talent that enters the school and succeeds in climbing the educational ladder does not flower fully because it is not discovered sufficiently early and is often studying in poor schools. For obtaining the best results in quality, talent has to be located early and allowed to grow in the best atmosphere under the best teachers.

Kothari Commission's Recommendations

Kothari Commission recommends placement and enrichment programmes for the gifted. A variety of extra mural programmes are also recommended as follows :

- A five or six weeks summer vacation programme can be arranged for gifted from different schools. It should have special facilities of staff, library, laboratory and equipment. The programme may be renewed for the particular group from year to year, so that the students get an opportunity to develop their special talent over a number of years.
- Well planned visits may be arranged to laboratories, museums and other places.
- Talented students may be brought into contact with persons engaged in the type of work for which the student show special ability or interest.
- Day centres may be made available for those whose home environment is not conducive to proper study.

Expectations from gifted are very high and not fulfilled to that extent. But today, there is a great deal of talk and activity about special provisions for the gifted. Indeed, there are some schools that are set aside for children with IQ above a certain point. There are classes or sections for academically talented youngsters in many places, something which could hardly have even been mentioned in some education circles a few years ago. It is unanimously agreed that there should be special schooling for the gifted children.

Attitude of Backward Students towards Education

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In ancient India, education was based on the caste system and it was given to the people of higher castes only. The people of lower castes were kept away from studies and they were forced to take up the profession of their forefather's, but gradually the scene changed and after independence, Government of India brought about radical changes. Every citizen has been given fundamental rights. The backward and scheduled castes (SC) and scheduled tribes (ST) have been provided special facilities and help for their upliftment. In regard of education, they have been given extra facilities in the form of free education, scholarships, financial assistance and reservations in various formal and professional educational institutions. Now, nearly 40 years have passed but still differences in academic achievement of higher castes and lower castes exist.

Attitudes towards education are related with the academic achievement, but attitude of backward and SC students towards education have not been studied so far among the Indian students. Keeping in mind this state of affairs, it was decided to study the attitude of backward and SC students towards education.

Methodology Descriptive method was followed and a standard scale of attitude towards education was developed by the authors to use in this project.

Sample : 260 students of backward and SC constituted the sample. The sample was selected through simple random procedure.

Result : Out of 260 students, 180 belong to backward class community and 80 students belong to SC. Among the 180 students of backward class, 110 were males and 70 female students and among the 80 students of SC, 40 were males and 40 female. 170 students were from urban background and 90 from rural background.

Table 1

Mean, standard deviation and critical ratio of academic achievement of backward and SC students

S. No.	Groups* ¹	Mean	S.D.	Groups	CR Values
1.	BCF students	254.85	34.11	BCF & M	2.509*
2.	BCM students	241.96	32.80	BCF & SCF	2.926*
3.	SCF students	234.37	35.97	BCF & SCM	4.848**
4.	SCM students	227.87	23.95	BCM & SCF	1.168
				BCM & SCM	2.867*
				SCF & SCM	0.951

Groups *¹

BCF backward caste female

BCM backward caste male

SCM scheduled caste female

SCM scheduled caste male

* .05 level significant

** .01 level significant

The mean value of academic achievement of the backward class students was 241.96 (SD = 32.80) in male students and 254.85 (SD = 34.11) in female students. Among the SC, it was 227.87 (SD = 23.95) in males students and 234.37 (SD = 35.97) in females. The academic achievement of students came out around 50 % and it was lowest in SC students. Although, they have been provided more facilities by Government as compared to backward class students. When various sub-groups of backward class male and female students and SC male and female students were compared, the difference in academic achievement was found significant between backward class female students and backward class male students ($p = .01$), backward class female and SC female students ($p = .01$), backward class female and SC male ($p = .01 \& .05$) and there was no significant difference between backward class males and SC females, SC female and SC male students.

While comparing academic achievement on residential ground, it was to be highest

among urban backward females while urban SC males had lowest academic achievement. Under-achievement among SC students may be due to various reasons. The common factors may be their family background, socio-economic status and parent's educational status.

Attitude

The mean score of attitude towards education of backward class male students was 2.60 (SD = .73) and in female 2.51 (SD = .53). Among the SC male students, mean score was 2.47 (SD = .50) and in females 2.71 (SD = .62). The attitude score was highest in the group of SC females and lowest in the SC male students. The difference was significant only between backward class male and scheduled class male students ($p = .05$).

When attitude was compared on residential background, it was found higher in urban backward class male and urban scheduled class female students and lowest in group of urban SC male students. The difference was

significant between urban SC male and female students ($p = .05$), urban backward class male and female students ($p = .05$) and in other sub group, there was no significant difference. The higher score of attitude scale among the urban students indicates that awareness of education has percolated more in urban society as compared to rural society. This difference may be due to family structure, social status and educational status of their parents. But the lower attitude score among the urban female students are not clearly explainable. It may be because they have to do household work and

they are not allowed to move freely out of homes.

When correlation was computed between attitude and academic achievement, it was found to be positive in all sub-groups of backward and SC except rural backward male students. Positive correlation between attitude and academic achievement indicates that efforts to develop positive attitude towards education may be more fruitful than mere financial help and reservation or relaxation provided by the Government to the students of these classes of society.

Teaching of Moral Education

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Ours is an age of moral turpitude and characterlessness based on terror, chaos and conflict. Then, how to inculcate some desirable values such as honesty, dedication, patriotism, mutual help and understanding among the school population of the Indian schools ? With the increasing moral complexity in the contemporary world, the pupils are expected to face more complicated decision – making situations about moral issues. They should be helped in developing the ability to make moral choices in such situations.

The rate of juvenile delinquency is increasing everywhere. It cannot be ignored as it is a symptom of a crisis which today's youth undergo in the process of their personal growth. The progress in science and technology without simultaneous development of moral attitude could have serious repercussion in many areas of life. Moral awareness should be promoted to orient the progress in science and technology towards the welfare of mankind. With the general decline of traditional values, moral confusion is in ripe in the contemporary world. Some common values should be rediscovered to unite human beings. Our school can not remain neutral so far as moral education is concerned. Teachers are always passing on some values whether they are conscious of it or not through their conduct in and out of classrooms, through their choice of instructional strategies and so on. The need for a consciously planned moral education programme, therefore, is obvious.

Meaning of Moral Education

According to Webster's dictionary, 'moral' is derived from Latin word 'Moralist' pertaining to manners or moral from mos, moris relating to manner. Thus, moral is related to dealing or capable of making the distinction between right or wrong in conduct/behaviour. It is based on general observation of people rather than on what is demonstrable, has moral evidence, i.e. 'How to develop right thoughts or attitudes for a moral victory ?' It is nothing but inculcation of moral values through observed or manifest behaviour of others or through moral based story-telling. It is based on 'moralism', i.e; a belief or practice of system of ethics apart from religion. A teacher is a moralist ; teaching morality to the students, i.e, developing a sense of rightness or wrongness of an action in a child in some meaningful and purposeful situation of life around.

According to C. V. Good Dictionary of Education, 'moral education is either formal or incidental instruction in morals or rules of right conduct in or out of school, as for example, in countries with a recognized state religion this may become the same as religious instruction and in countries where there is no state religion, such instruction in state or public schools may become the same as character education or even civic education. Thus, in a secular country like India, it can be imparted through moral guidance based on morality, equity and good conscience. It is based on the principles and standard relating to right or wrong mode of conduct that are accepted in our society. As such, it is based on (a) moral judgement and (b) moral law, i.e. rule of right or wrong conduct that may be regarded as derived from divine-revelation, human intuition or human interaction. Thus, we have to develop moral sense (ethical sense) and morals of other students. In other words, we have to develop such virtues or elements that make up morality – a sense to distinguish between right or wrong. Examples of right morality are obedience, honesty, truth, dedication, pity, sympathy, love for mankind, patriotism, loyalty and hard-work as against disobedience, dishonesty, falsehood, cruelty, hatred, bigotry, disloyalty, and shirking of work as immorality. Psychologically speaking, a man is a bundle of vices and virtues – we have to go through education in such a way that his virtues may be developed and vices may be curbed down.

How to bring a change in his behaviour ? According to behaviourist school, a teacher has to develop some positive traits or desirable values and curb negative traits in him(as given in the credit card of the school diary). Hence, education is modification of behaviour, i.e. to prepare better citizens in changing situations of our life. As such, the aim of education should be moral-based i.e. building of moral character

through moral concepts as acceptable by our society. Thus, education is meant for :

1. Intellectual development
2. Social development
3. Physical development, and
4. Moral development.

Out of these four functions of education, the emphasis is on moral development based on a tried out programme by the incharge of 'moral-value-drive' as given in the school diary. It has :

1. List of 'code of moral conduct' (An innovative design for value-oriented programme).
2. A table showing month-wise statement for attitudinal changes.
3. Self assessment check list of moral code of conduct.

These have been tried out under "inculcating desirable values through moral education" in DMPHS School, Ajmer and the results are satisfactory.

Problem and its Significance

How to inculcate some desirable changes through moral education ? Some of the common values are—honesty, dedication, patriotism, mutual help and understanding, good manners, orderliness, punctuality, discipline, obedience, cleanliness, cooperation, truthfulness, kindness, dignity of labour, justice, tolerance, human brotherhood, dignity of the individual, democratic spirit, understanding of other religions, international understanding and ability of making moral judgement, etc.

Moral education is a subject which is now being discussed with increasing interest in educational circles. Some desirable changes

can be brought about through attitudinal changes under moral education and not under religious education in a secular country like India.

Considering the chaotic condition in our country with increasing lawlessness and deep-rooted corruption, the magnitude of the problem is stated as under :

- 1 How to produce better human being with better understanding ?
- 2 How to shun narrow loyalties and differentism from the country ?
- 3 How to awaken social awareness among the students ?
- 4 How to eliminate deep-rooted corruption ?
- 5 How to produce enlightened, cultured and better citizens in our country ?
6. How to use education for a behavioural change in our society ?
- 7 How to inculcate some desirable values among our school going children through moral education ?

There are two issues related to this problem .

1. Through cognitive domain (i.e. child's development of personality)
2. Through effective domain (i.e. through syllabus).

Moral education is not "other man - directed activity" but 'inner-directed' activity. The morally matured man is a rationally altruistic person. Morality is no mystery ; it is not a vague quality. Morality is simply the action of the man who having reasoned compassionately, acts on his convictions.

The problem of moral judgement in adolescence is related with the problem of motivation because doing is different from thinking. Different psychologists have given their different views. Piaget says that the origin of this lies in his discovery that there was a marked difference between what children said, they should do and what in fact they would do. Here, we are dealing with the former, i.e. the moral judgements not the conduct precipitated by the moral problem situation.

Morris's analysis revealed five categories of judgements and they are :

- (a) Action based on normative considerations.
- (b) Action based on consideration of self-respect.
- (c) Action based on consideration of respect for authority.
- (d) Action based on conformity to beliefs or behaviour of others.
- (e) Action based on claims to independence.

Wilson suggests the criteria of mature morality as :

- (a) Attention to one's own and other's feelings.
- (b) Attention to empirical facts of a 'hard' kind.
- (c) The ability to formulate and modify rules on moral principles.
- (d) The ability to use language logically and clearly.

Suggested Programme

The whole topic revolves round a triangular approach :

1. The need stage
2. The exploratory stage
3. Suggestive stage.

The moral education means how to make students more autonomous, responsible, rational and altruistic through attitudinal change, no matter how we differ in religion and philosophy. There are two issues related to this problem : (a) moral education should be given top priority in the educational programme for the upliftment of our country, (b) Moral training through instructional programme based on text-book i.e. Moral training may be conducted as an integral element of almost every school lesson. The whole programme can be channelised through :

1. Cognitive domain
2. Affective domain

The first refers to intellectual aims and involves the teacher in a consideration of the purely academic element in his work. Here, the

teacher would place the data, principles and theories inherent in a particular subject. The second refers to values, beliefs and attitudes. From this, it would appear that with competent teaching the acquisition of values and beliefs is an inevitable process in every school lesson (Bloom)

Moral development may be understood in term of moral attitudes, those methods which are able to induce attitude formation and change appear to be the techniques which should be employed in a course of moral education. Thus, Hovland, Janis and Kelley speak of the three elements to be considered in any attitudinal change. These they refer to as :

1. The communicator — who says it
2. The communication — what is said
3. The audience — who hears it.

In the classroom, these three elements would be clearly identified as the teacher, the lesson material and the pupils.

Projective Teaching

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One can establish (i) the right order of teaching, (ii) perfect form of communication, (iii) optimum level of teaching, (iv) a definite relation among elements of teaching and (v) the true-nature of a concept. If a distinction is made between lower and higher aspects of teaching through a scheme of education, the line of scholarship in which is totally *de novo* in the literature of educational research. For explicit exposition, consider two sets of teachers trained in two schools of thought, which function diametrically opposite to each other. Will there be any difference in the nature of their teaching ?

The first type has been trained in a college of education where he was taught philosophy of education, psychology of education, evaluation, methods of instruction, school organisation, current trends and special methods, say, mathematics and science — all comprising of eight papers.

The second type had the benefit of a rigorous training in a school of education where he studied philosophy of mathematics, psychology of mathematics, history of mathematics, research in mathematics, current trends in mathematics, science of mathematics, (dealing with concept-formations), comparative mathematics education and pedagogy of mathematics, in all eight papers:

Now both took up the teaching profession as their main career.

Let us take one more example by referring

to a "language teacher" say English. The first case is as usual trained in present day college of education where he took 'English' as one of the special methods.

The second teacher studied in a school of education, has mastered the following before taking up a teaching profession : philosophy of language, psychology of language learning, history of language development, research in languages, comparative languages, literary criticism, pedagogy of language, aesthetics, and grammar.

Our problem remains the same, viz., find the differences in their teaching settings.

Action research is not necessary for this purpose, but simple common sense is sufficient to conclude emphatically that there will be a vast range of differences in their teaching settings or communications some of which are referred to below :

S. No.	Item	Teacher trained in	
		College of Education	School of Education
1.	Over-all specialisation	Nil	Nil
2.	Area-wise specialisation	Nil	In one subject
3.	Nature of pedagogy	General	Specific
4.	Maturity of teaching	Not to that extent	Matured
5	Concept development	Vague (General nature)	Clear and specific

The same thing can be extended to all other school subjects like history, geography, science, etc.

Why this Sort of Differences ?

Present-day colleges of education mainly aim at the 'all-round development of personality' so much so that subjects taught therein are of more of a general value than specific applications of their own kind for functional ability of the pupil trainee. The same case is with their products viz., general teachers in mushroom growth. The headmasters of some schools are using PT teachers for the teaching of languages and science teachers for the co-curricular activities since they have firm faith in 'all round development' of these training institutes. This, in fact, is the hard truth.

Learning the laws of psychology of animals is not sufficient. In order to apply them to human beings in specific instances, one needs great skills or ability. Concept formation via true foundations of education is not that much of an easy job as one thinks. It is a more complex job than that of an engineer or doctor who deals with inert or organic matter.

A technicalised pedagogy never attempts at the formation of a simple concept but it

projects the true concept with its foundations – philosophical, sociological psychological, historical etc. reflecting its roots of reference frame which are the true characteristics components of branch of knowledge taken up for study. Hence the origin of 'projective teaching' where the teacher visualises the pupils as micro-budding artists/technicians/scientists/mathematicians/architects/philosophers in learning session, a sharp contrast to the normal teaching sessions where the pupils are seen as 'pupils.'

The epithet 'projection' is justified on the following grounds :

- Projection takes place with a reference frame.
- Concept development through the foundations of the subject.
- Preservation of the evolutionary spirit of learning unit.
- Teaching through 'specialisation'.
- Convergence of various foundations of education in the specific learning unit.
- Flow of content in 'methodology' and vice versa.

- Projecting the subject as it is in its true spirit, without any contamination by the personality of the teacher.
- Replacing English, science, maths, economics, etc. by English education, science education, maths education, economic education and so on.

Just as river finally flows into the ocean and becomes saltish, the 'concept flow' in projective teaching canalises the thought flow of the students in the culmination of 'universe of the subject'

Every subject is a universe by itself. It has, its own beauty, truth and goodness. It has its own basic components on which its edifice has been erected. Each brick of its architecture preserves the true reflective characteristics of the subject in itself. In other words, a micro model taken at random for study, when enlarged completes its biorhythmic cycle, in response to the life-system of the subject in macro form.

Each micro - cyclic - operation of a learning bit is in consonance with macro-rhythm of subject. The teaching stimulates the learner as 'functional artists/technicians' in evolving their own thought envelopes, corresponding to the architecture of the subject where the structural elements are preserved in their respective places.

Analogically put, the universe of mathematics is totally different from the universe of science even though their conceptions occur more or less in 'configurations'. That is why, the 'space-time' in which we live, is conceived differently by the different schools of systems varying as a four dimensional continuum in a scientist's mind and as abstract continuum in a mathematician's mind. Indeed, thoughts vary ! So, are the teaching styles !

Amongst the factors that are aids to liberation, projective teaching is the highest as

there is no confinement of the pupils thoughts, except 'devotion' to the subject. It dispenses the fruits of thoughts, attuning one's own mind to the spirit of the subject, with 'love'. Love is the only binding force that checks the wavering mind by making it one-pointed on what are relevant, rational factors in the domain of knowledge

While teaching a language, the presentation is projected in imprinting on the pupils' mind the "universe of languages". To achieve this grandosity each segment of teaching is directed to generating a micro-universe of the same frequency as that of the universe of language. The sum total of micro universes after all leads to the formation of macro universe which is nothing but the true form of the subject, as conceived by a poet or dramatist or grammarian of a language. This is the true form of teaching.

Initially, the projective teaching aims at the formation of micro outlets of the subject making the pupils consider themselves the real architects of the subjects. The degree through which the basic structural components of a subject (axiom, definition, theory, theorems etc.) are linked with the reflective characteristics of foundations of education (psychology, philosophy, etc.) in the evolution of a particular 'concept', gives what is known as 'level of teaching' which is measurable through the instruments designed for this purpose.

When the teacher passes through a cycle of active phase, he generates coherent micro-universe where the links of a particular concept are arranged in a definite order and during the passive phase of teaching, the links are jeopardised. The former is "perfect teaching" and the later is "passive teaching". The intervening phases are classified as 'unstable teachings phases' where the educator undergoes energy variability for stability. An even

teaching lies somewhere between these two extremities.

An overhaul in B.Ed. set-up, indeed, is the need of the hour - both content wise and practicum wise. No more 'general teaching' : all is 'specialisation'. Specific applications of each general subject converge at one point, culminating in one phase subject for specialisation in the field of education

The following steps, however, show the *direction* of projective teaching flow.

- (a) Teaching of foundational courses in terms of specific applications.
- (b) Analysis of concept using the above theoretical grounds.
- (c) Formation of micro-universe corresponds to that of a given concept.
- (d) Net-work of a micro unit.
- (e) Projective technique employed to release the micro unit.
- (f) Reactional study of the functional pupils.
- (g) Measurement of outcomes.
- (h) Completion of t-1 circuit.

The 'polyvalent teachers' are replaced by 'monovalent' teachers in projective teaching. The nature of the subject (to be taught) is

preserved in fact right from KG to university level. A student is not passing through primary, secondary and university levels of teaching but he comprehends his outlooks through the expansions of the horizon: of micro universe in the constant light of 'exploration'. So, he jumps from one stage of learning to another. So, to say at any stage of his maturity, he can join hands with scientists or mathematicians or poets or historians or economists.

A projective teacher who specialises in the 'projective teaching' visualises all other branches of knowledge in terms of his specialised branch of the subject without dualities and distinctions and contemplates the form of the formless knowledge, (i.e. abstract) for "absolute awake" among the disciples. It is pursued for the intrinsic delight it affords. It is an end in itself. The joy of beholding in one's mind's eye, the 'unified system of knowledge' becomes greater than even the joy of dualistic teachings where compartmentalized teaching has parallel circuits

Thus, projective teaching has a 'double place' in the scheme of education. It leads the aspirant to liberation and love to dwell in the realism of knowledge.

After all, who is not interested in "liberation" through "love" ? Isn't that the ultimate goal of education ?

In-service Education of Elementary Teachers

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No formal education in a college/university or in a college of education/medical college/I.I.T. can fully prepare an individual to discharge his/her professional responsibilities effectively for ever. At best, it can help an individual to acquire the existing knowledge and skills and instil in him an attitude which would cause him to seek new knowledge and acquire new skills as he progresses in his career. In the absence of such an attitude, the individual gradually ceases to be a professional and as such becomes less and less effective in discharging his/her professional responsibilities. This is particularly true of a teacher who is to prepare children for a type of society which is yet to exist.

Development in content areas, advances in pedagogical science, revision of school curriculum, changes in socio-political scenario, job expectations of teachers etc. are taking place very fast. These developments demand from existing teachers acquisition of new knowledge and pedagogical skills to transact the curriculum effectively. Further modification in their perceptions about children, school education and society are also called for. To bring about these desired changes in a teacher, the role of in-service education hardly needs any emphasis. The National Commission on Teacher - 1 in its report also highlighted that 'with the explosion in knowledge, the revolution in the world of the media, with contemporary issues demanding urgent attention, with values

getting eroded, the need for helping teachers to keep abreast of things cannot be questioned'

During the last four decades, there has been a phenomenal increase in the growth of educational facilities at all the stages of education. For instance, the number of institutions dealing with elementary education increased from 2.23 lakh in 1950 to 6.68 lakh in 1986. Though the achievements have been substantial in quantitative terms but the quality of education has not kept pace. This is particularly true of primary education. A number of studies have revealed that children do not develop expected competencies in reading and writing in their mother tongue at the primary stages. The learning of arithmetic is also poor (Planning Commission, 1984).

The need for qualitative improvement of primary/elementary education therefore, hardly needs any emphasis. In-service education of elementary teachers periodically is one of the significant inputs to improve the quality of primary/elementary education. The existing facilities of in-service education of elementary teachers are woefully inadequate. The National Policy on Education (1986) envisaged the setting up of District Institutes of Education and Training (DIETs) to improve the quality of elementary education, hasten the attainment of the goal of universalisation of elementary education and to realize the targets of adult education. About 263 DIETs have so far been sanctioned by the Ministry of Human Resource Development (MHRD) to realise the said goal.

A good number of them have started functioning. Each DIET is responsible for the educational development of its catchment area i.e. the district.

Work Force in Elementary Schools

One of the functions of a DIET is to provide inservice education of at least two-three weeks duration to all the elementary teachers in its catchment area at least once in five years. This is quite an uphill task if we consider the number of elementary teachers in the country and the number of DIETs which are proposed to be set up for the said purpose. The number of teachers at different stages of education, as on 30-9-86 is given in Table 1

TABLE 1

Number of Teachers at Different Stages as on 30.9.86

School Stage	No. of teachers (in Lakh)
(a) Primary	18.65
(b) Upper Primary	9.21
Total - Elementary (a + b)	27.86
(c) Secondary	6.82
(d) Hr Secondary	2.73
Total - Sec + Hr Sec. (c+d)	9.05
Grand Total for all stages (a+b+c+d)	36.92

It is evident from Table 1 that out of 36.92 lakh teachers working at different stages of school education, 27.86 lakh are at the elementary level. In-service education of teachers working at this level is the responsibility of DIETs. It is expected that all

the 400 DIETs proposed to be set up would become fully operational by the middle of Eight Five Year Plan. The estimated work force of teachers at the elementary level during the middle of the Eight Five Year Plan would likely to be 35.2 lakh as given in Table 2.

TABLE 2
Estimated Number of Teachers at Different Stages
(As on 30-9-92)

School Stage	Number of teachers (in lakh)
(a) Primary	23.6
(b) Upper Primary	11.6
(c) Total Elementary (a+b)	35.2
(d) Secondary and Hr Secondary	12.0
General Total for all Stages (a+b+c+d)	47.2

It is evident from Table 2 that 35 lakh teachers are required to be provided in-service education atleast once in five years by 400 DIETs being set up in the country. As such, seven lakh teachers need to be provided in-

service education every year. This is quite a formidable task and is a challenge for DIETs to meet. The challenge becomes clear from Table 3.

TABLE 3
Number of Elementary Teachers to be Trained by DIETs

Category of teachers	Estimated number at the middle of VIII Plan	No of teachers to be trained annually as to cover all in five years	Estimated number of teachers one DIET could train in a year through programmes of minimum 2/3 weeks duration	Total number of teachers who would be covered by 400 DIETs annually
1	2	3	4	5
1. Elementary	35 lakh	7.0 lakh	600	2.4 lakh

It would be clear from Table 3 that in-service education of 7.0 lakh elementary teachers annually is the responsibility of 400

DIETs. It is estimated that a DIET can provide in-service education to about 600 teachers in a year by organising 12 courses of 50 teachers

each. If it is so, 400 DIETs may be able to provide in-service education to about 2.4 lakh teachers in a year. The remaining 4.6 lakh teachers may get deprived of opportunities of professional growth.

In-service training centres being run in different states like Maharashtra, Punjab etc. may cover some percentage of these left over teachers. These figures however, present the scenario at the national level.

The number of teachers per district differs from state to state. Further within a state, it may differ from district to district.

It would be clear from Table 4 that there are about 6600 elementary teachers in a district on an average in the country. However, the number of these teachers ranges from 231 per district in Union territory of Daman & Diu to 12,459 teachers per district in the state of West Bengal. Each DIET is, however, to collect data with regard to number of elementary teachers work in its catchment area. On the basis of that each DIET needs to plan programmes in such a way that all the teachers in the district are covered atleast once in five years. In a district, where the number of elementary teachers is 3000 or less, it may be feasible for these DIETs to accomplish the desired task. Districts in which the number of teachers is more than 30000, DIET for these districts may not be able to provide in-service education to all teachers in the stipulated period of five years. In such a situation each DIET needs to adopt suitable strategies of in-service education in order to cover the target population of teachers within the stipulated time frame.

Modalities

The following are the important factors determining the use of modalities of in-service education :

- Cost - benefit analysis
- Objectives of in-service education
- Duration of the in-service education.

Besides the said factors one or two more can be added and mentioned.

The following are the modalities which can be used by DIETs for providing in-service education to elementary teachers:

- Contact mode
- Regular professional meetings at the level of school complex
- Professional support through print media
- Professional support through non-print media — video/audio cassettes, radio broadcast, telecast of films of—
- - Self learning
- Open School/Open Institutes of Education.
- School based in-service education.

The above mentioned list of modalities of in-service is not exhaustive. Contact mode is the predominant modality of providing in-service education. Even after the targeted number of 400 DIETs are established, it may not be feasible to cover all the teachers in five years. Barely one third of them would be covered. This situation raises an issue as to how to cover the remaining two-third of the target elementary teachers population.

Think for a while and go through the suggestions given below evaluate them on the basis of your experiences.

One of the strategies to tackle the situation is that in states where the intake in pre-service teacher education programme is considerably in excess of the annual requirement of trained teachers and which have a considerable backlog of unemployed trained teachers but not too

many untrained servicing teachers (U.P, Karnataka, Kerala, Andhra Pradesh and Tamil Nadu), Government institutes which are not to be upgraded into DIETs/CTEs/TASEs may be made to switch over wholly of substantially from pre-service to in-service training activity. This step would augment the facilities for providing in-service education to elementary teachers.

Further each DIET may determine the number of teachers which cannot be covered through DIET programmes and plan about the number of teachers which can be covered under the programme PMOST which may continue during the Eight Five – Year Plan. The number of primary school teachers which have so far been trained under Programme of Mass Orientation of School Teachers (PMOST) are given below :

TABLE 4

Number of Primary School Teachers Trained under PMOST

Year	Number of Primary teachers
1986-87	3,25,806
1987-88	3,07,318
1988-89	2,97,977
1989-90	3,10,000
	12,41,101

The National Policy on Education (1986) envisaged the setting up of school complexes all over the country. School complexes in some states for instance Maharashtra are already functioning. One of the important functions of a school complex would be to provide professional support to its teachers, specially of primary and upper primary schools. Every school complex will have atleast one colour T.V. set and one Two-in-One. It is proposed

that eventually the lead school of every complex may in addition, be provided a VCR and a collection of video/audio cassettes and books/journals useful for in-service education of teachers. Apart from its own collection, it may also borrow cassettes from the DIET and other nearby resource centres. The lead school may circulate the VCR, cassettes and library material among its constituent schools for use of teachers in a systematic manner.

It is proposed that during an academic session, at least six monthly meetings of a professional nature should be held in the schools of the complex. The following activities may inter-alia be taken up in these meetings.

- (a) Screening/playing of cassettes on various themes
- (b) Lectures/demonstrations by resource persons
- (c) Group discussions on subjects and problems of professional nature.
- (d) Field visits/study visits
- (e) Self-study.

Each DIET is expected to have a rich library of audio/video cassettes. DIETs should extend support to school complexes by providing experts and lending audio and video cassettes.

Professional Support

The print media are also an important way of supplementing contact and other programmes of providing professional support to teachers. SCERTs in different states need to bring out a publication of a professional nature (preferably a quarterly journal) in the regional language(s) for teachers. Copies of this journal may be supplied to every school in the state. In the

same way, each DIET needs to bring out a newsletter for all schools in its catchment area. The professional support from the SCERT and DIETs in the form of journal and newsletter will go a long way in promoting professional development of teachers

It is generally observed that teachers have the tendency not to read the journals/newsletters. Steps need to be taken to ensure that teachers read journals and newsletters. Heads of institutions need to hold staff meetings periodically in which articles contained in newsletter and journals are discussed critically at length. DIETs need to get in touch with schools to receive feedback to improve the quality of journal/newsletter and also to cover themes suggested by teachers.

Facilitating Professional Growth

Self-learning among teachers needs to be promoted to improve the quality of teaching learning process in the classroom. At present, teachers who wish to pursue the academic/professional education on their own take one of the degree/diploma courses offered by universities in the correspondence cum contact mode. These courses are of minimum one year duration. There is a need to make available to teachers a variety of professional course of short modular nature which they can take up and complete one at a time and earn credits and incentives for them

It is envisaged that Indira Gandhi Open University (IGNOU) would set up study centres in almost all the districts in the country. It is also envisaged to set up Open Institutes for Teachers (OIT) in each state as a part of state Open University/Regional Centre of IGNOU. An OIT would offer short term modular courses. Credits would be awarded for successful

completion of each module and the acquisition of a specified number of credits may lead to a diploma/degree also. DIETs need to co-ordinate with the proposed study centres of IGNOU and also encourage teacher in their catchment area to derive benefits from the proposed centres.

Broadcast and Telecast

Regular programmes of telecast and broadcast for elementary teacher would reduce dependence on VCRs at the school complex level. In this case DIETs and SCERTs need to work in close collaboration with the Doordarshan and the All India Radio.

We are aware that Education Department, Government of Tamil Nadu has successfully used correspondence cum-broadcast mode for Tamil Teachers. Realising the need for developing among teachers habits of correct speech and writing, the SCERT launched upon such a course for Tamil teachers. This has been done in collaboration with the Central Institute of Indian Languages Mysore and the All India Radio, Madras.

School Based In-service Education

This is one of the strategies for promoting teacher development. It brings the in-service education of teachers to the portals of a school. In this strategy, a resource person goes to the school and interacts with the teachers to find solution to the problems being faced by them. Talks are arranged on the felt needs of teachers. Teachers are not as such required to move to a in-service training centre for in-service education. This approach/strategy is less expensive. Teachers are not withdrawn from the school. Teaching in the school is not affected at all. The strategy has, however, certain limitations and constraints.

Assessment

Assessment of teacher's need is an important step towards the professional growth of teachers. Needs for in-service education of teachers emanate from changes in school curricula, innovations in methods of teaching, results of public examinations, informal interaction and discussion with teachers, inadequate background of teachers, changing national goals etc.

An investigation into the nature of in-service programmes being organised by various agencies like SCERTs, NCERT, and other agencies/institutions reveals that the programmes are hardly need based and are predominantly theoretical. There is also lack of follow-up studies, evaluation, co-ordination among various agencies. Besides, research support to improve the effectiveness of in-service programmes is lacking. Studies determining the impact of in-service education programme and to identify suitable strategies for motivation of teachers etc. are conspicuous by their absence.

The National Commission on Teachers—I also highlighted that 'there is to-day an absence of clear-cut policies and priorities of in-service education. There has been no systematic identification of needs. The content and quality of programmes offered are generally poor.

Strategies for training are vague and half hearted. Not much emphasis have been placed

on solving the practical problems of teachers or meeting their educational needs. In-service courses rarely result in the development of corpus of instructional material that can be used by the participants and other teachers. Hardly any use is made of new media and technologies. The Commission, therefore recommended for a thorough overhaul of existing practices. It further stressed that 'the qualitative improvement of in-service education must be given top priority.'

Course for in-service education of teachers needs to be organised on the following areas:

- Liquidation of under-qualified and untrained teachers
- Sharpening of teaching skills
- Upgradation in content areas
- Need – based programme
- Development of values
- Working with the community
- Self study skills among teachers
- Courses dealing with disadvantaged children
- Developing reference and study skills in school students

Besides the said areas of in-service education, each DIET should identify specific needs of in-service elementary teachers working in its catchment area and organise in-service education programmes of suitable duration by making use of appropriate modality to achieve the desired objectives.

Pre-school Education

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Studying the cultural aspects of kindergartens around the world one becomes aware that each culture has different expectations of what kindergarten will make of its children. In the United States a positive self-concept and respect for others are some of the main objectives of kindergarten. Italian children are to know their culture, its festivals and history. Russian kindergartens try to teach children love of country and work, and respect for elders and peers. Moral character is important for the Japanese. Although all of these objectives are in some sense similar, they are all tailored to meet social standards of the country. The communist work ethic can be seen in the Soviet Union and Italy's love for art can be found in her pre-school education.

There are the cultural demands as to what children need to receive in kindergarten, but there is also the question about what the experts say children need to receive in their pre-school education. Froebel's original plan for kindergarten has been adapted all over the world so that today, in many countries, it may hardly seem to resemble the original experiment in Germany. The culture decides what the child receives, but what about the child's needs?

What the child needs is very important when planning pre-school education. Two world renowned child psychologists, Erik Erikson and Jean Piaget have discussed what a child's development is like in these pre-school years. According to their observations and theories

about pre-school children, we will set up some guidelines for kindergartens, not necessarily what the culture prescribes, but what the psychologists say children really need during third stage of development

Erik Erikson, the German psychologist, set up a chart of human development. He divided this development into distinct phases. Each phase contains two emotions, a positive development and its negative counterpart. The human being faces a crisis to work out these emotions at each phase and to either obtain the positive or negative. Of course, each emotion is seen before and after the crisis period, but the crisis period is the main part of working the problem

The third stage, initiative vs. guilt, follows the time when the child has hopefully gained trust in the world and confidence in itself. The child will now learn to have faith in its own actions and "what kind of person he wants to become". This is also the time when children are experiencing their pre-school education.

At this stage children are physically a much different being than they were as infants. They are much stronger than before and are getting adept at using language to get what they control" (Gross, 30). Children are walking powerfully and without trouble. Children are more relaxed and affectionate than before and are, more than anything livelier, (Erikson, 36). They are also becoming more aware of their environment and "of the roles which adults play, particularly those like train drivers, nurses or policemen, which are clearly signified by dress or function" (Stevens, 47).

An overwhelming sense of guilt in the child can lead to over obedience of conformity, the inability to act out what is desired, (Stevens, 47). It is therefore important that "children be allowed to assert themselves without being crushed by a sense of guilt at what they wish to do. "Children of this age will have guilt feelings, but, according to Erikson, that is absolutely normal. The concern is that children do not become overwhelmed by guilt and lose their initiative. This guilt is important because it is the beginning of a conscience. (Gross, 32).

A developing conscience is, however, fragile. It can be primitive, cruel and rigid, (Erikson, 40) and there can be disastrous effects if the parent, "the model for this conscience, fails to live up to it in the eyes of the child". (Gross, 32). Erikson says that the hate which can result from the natural inequality between

parent and child is one of the most difficult life conflicts which can develop. (Erikson, 41).

But what one mostly associates with children of this age is play and, as Erikson theory says, "play time is not wasted time; it is vital time. Its loss would be a vital loss". (Gross, 83) whereas adults use their "play" as an escape from the world of work. Children's play is necessary for their development. For them, "playing is a form of practicing for future events" (Gross, 83) in that they anticipate real-life situations. Play also allows them to even the score for the many battles that they lose with teachers, parents, and siblings. Erikson also sees play as the revealer which shows not only where a child's troubles lay, but also how they can be cured

Erikson sees this pre-school age as the time when a child begins to discover what kind of person it wants to be. It is also a time of many secret fantasies and guilt feelings. It is important that children not be crushed by their sense of guilt and especially that they be allowed to play, as it helps them to work out their problems and prepares them for life.

Jean Piaget, world renowned Swiss child psychologist, studied the development of children very closely, but he did not describe phases comprising opposing emotions as Erikson did. The phases he talks about are not as strictly defined. He talks about the age from birth to two years as being the sensory-motor period. The second phase, from two to seven years of age he calls the pre-operational period and marks the beginnings of logical thought. This phase, which includes the time we are discussing, is divided into two parts, from two or four years and from four to seven years.

Piaget argues that all children go through certain stages of development although they may reach these stages at different times. He

also talks about four different factors that are essential to cognitive development. The first of these is physical maturation. The second is experience and with this Piaget means physical knowledge and secondly, logical-mathematical knowledge. When the child acquires knowledge about the physical world and begins to make logical connections (for example, discovering, discovering when playing with a certain number of stones that no matter how they are arranged, their number stays the same) It begins to develop logical thinking processes. And because children will make many discoveries on their own, they must be allowed to do their own learning. The third factor is social transmission; the information that children receive from teachers and parents, books and education. When a child hears contradictory or challenging statements, his equilibrium is shaken until the child finds an answer to the problem and then reaches a higher equilibrium. This equilibration process is the fourth factor. This can also be provoked when a child is forced "to take account of facts for which he does not yet have an explanation". (Pulaski, 195). Then children are provoked into making connections. This could be the equivalent of structured instruction in kindergarten which would also be a part of a child's education.

The pre-school years are in the middle of this process of moving towards symbolic thinking even though at this age they are still egocentric. This egocentrism means that the child assumes that everyone shares his emotions because he is not yet able to comprehend someone else's point of view. He believes, not only that "the world was created for him (but also that) he can control it". This means that the sun and moon follow him when he is walking. (Pulaski, 45) But it is during this period that an "emerging sense of self in relation to others" develops. The child develops relationship outside of his own family and has

new interests and values (Pulaski, 36). This time is really the bridge between sensory-motor and later intelligence.

One important thing to realize in this age is that children under seven years do not follow the rules of a game although they, at the same time, hold the rules for holy and untouchable (Ginsburg/Opper, 146). They are incapable of considering their own interests and the needs of the others at the same time. They therefore often break the rules. (Ginsburg/Opper, 148). This is part of their egocentrism that will not be worked out until they are older. This double standard also is a part of a child's views of injuries. Children cannot distinguish between intent and resulting injury and see only the results. So even if they unintentionally injure another they have trouble seeing that they did not want to hurt the other.

This age is nonetheless an important bridge and symbolism, which is "a necessary step on the way to developing adopted intelligence", (Pulaski, 85). And it is in the first kindergarten years, from three to four, that symbolic play is at its peak. At this age, children no longer have to be busy with things, but can work with substitutes (Ginsburg/Opper, 110). This is the age of imaginary friends and compensatory play where children allow the imaginary friend be a mirror of itself and help them deal with situations, especially those in which they are refused something. For example, if the father forbids something, the child may resort with "My friend's father lets her do that" or, as within's Piaget's own of this author it is possible to formulate a set of general guidelines for kindergartens that have the welfare of the children in mind, not any "cultural requirements" ?

Playing should be one of the first priorities. Children should be given time when they can play with their peers unsupervised and without

fear of getting "caught". They should be allowed to play freely, within the playground and safety rules, of course. Their fantasies and imaginary friends should not be viewed critically. To try to explain the illogical aspects of them would have no point and perhaps only give the child guilt feelings. And because sexual curiosity is natural at this age, it should not be punished or given evil names. Centuries of Catholic warnings that masturbation leads to warts or blindness have not stopped this natural process from occurring.

Because this is the time when children begin to develop a conscience, that should also be kept in mind. The double morality that Erikson speaks of should be prevented in that teacher and child have a set of rules which all must obey. There need to be a consciousness that children cannot follow rules and that they cannot differentiate between intent and injury.

"Don't cry over spilled milk" should be definitely a part of kindergarten philosophy.

This is children's first socialization experience; therefore, there should be a social structure in the kindergarten. Games with rules as well as free time, a set of rules which all follow help to give the child a basis to begin developing a morality.

These guidelines may seem a bit simplistic, and may already be included in the structures of many kindergarten, but it is important to keep in mind that children are children no matter where they are in the world. They all have certain developmental needs, no matter what the philosophy of their land. Looking at the research of experts can help remind us exactly where the development of a child stands and how to aid that growth. Perhaps that will help remind us, as adults, that the health of the children is the most important thing.

Piaget's Theory in Classroom

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This paper discusses and analyses Piaget's theory and assumptions of cognitive development. Secondly it highlights different attempts to translate Piaget's theory in the classroom. Thirdly, it focuses on how cognitive development can be fostered through cognitive growth model using teacher made task. Fourthly, it discusses the ways and means of implementing cognitive growth model. Cognitive growth model is an innovative practice of teaching for increasing the capacity to think. This model is applicable to both cognitive and moral development and can be used for diagnosis and evaluation. The sample task presented in this paper has been designed only for instructional purposes.

Piaget proposes that cognitive development consists of four global stages - the sensory-motor stage (roughly birth to 2 years), the pre-operational stage (roughly 2 to 7 years), the concrete operational stage (roughly 7 to 11 years), the formal operational stage (roughly 11 years and beyond). Each stage has a underlying competency systems which Piaget calls 'cognitive structures'. The cognitive structures of a stage are comprised of mental entities called operations. These operations change through the process of assimilation and accommodation. Assimilation is the integration of external elements or input into the existing cognitive structure. Modification of a structure

to fit the input or new experience is called accommodation. In this process, the mind assimilates information from the environment and change occurs within the existing mental structure in order to accommodate the new information. Efficient cognitive development depends upon appropriate match of experience or input and the existing cognitive structure leads to a form of mental balance called equilibrium state. The systematic changes which occur as a result of equilibrium give rise to the above mentioned stages of cognitive development.

Cognitive development determines when and under what conditions an instructional

programme will be effective. If a group of children is trained on a concept from one of Piaget's stages, the amount of learning that is obtained in individual child is expected to vary significantly as a function of the initial cognitive levels of the children. That is why it is concluded that other things being equal, the higher a child's current state of development, the better his or her learning is likely to be. According to this theory, a concept cannot be developed unless the relevant structures for that concept have been laid in. Therefore, training/teaching of Piagetian tasks can be effective to the extent that the structures which are necessary for the expression of that concept have already developed. These claims are summarised in Piaget's statement that "teaching children concepts that they have not acquired in their spontaneous development is completely useless".

Cognitive development depends upon four bio-social factors. Piaget has listed this in his "summing up of our work in child psychology". The first is organic growth, especially the maturation of the nervous system, which he calls necessary and indispensable but only one factor among several. The second is the role of exercise and of acquired experience in the actions performed upon objects including both direct physical experience and indirect logico-mathematical experience. The third factor listed is social interaction and transmissions, which like maturation is necessary and essential and insufficient by itself. The fourth and final factor, the co-ordination of first three factors into a simple and regular sequence of stages is equilibration. This, perhaps, is the central concept in Piaget's work.

The syntax of the model consists of three phases—confrontation with stage relevant tasks,

inquiry and transfer.

Phase I : Confrontation with stage relevant tasks

Present situation well matched to learners developmental stage.

Phase II : Inquiry

Elicit students responses and ask for justification.

offer counter suggestion and probe students responses.

Phase III : Transfer

Present related task and probe students reasoning and offer counter suggestion.

In phase one, the students are presented with puzzling situation well matched to their developmental stages. In phase two, the students responses are elicited and probed by the teacher through neutral questions. Generally probing consists of asking for justification and offering counter suggestion. The phase three is the transfer phase, here the objective is to see if the student will reason similarly on the related task. This transfer phase strengthens the reasoning of the second phase. The teacher probes students reasoning and offers counter suggestions.

If the student is not in a position to respond at any stage, then teacher takes the child back to beginning point or any other suitable point in between. Even then, if the child is not able to respond then he is provided with task of lower difficulty level.

At the time of presentation of task, the social system, principle of reaction and support system are followed.

Social System

An environment of activities and materials that induce students guided inquiry is provided. In most cases, teacher initiates and guides the inquiry in a free intellectual and social atmosphere.

Principle of Reaction

The teacher creates a facilitating atmosphere so that the child feels free to respond naturally. The teacher constantly tests students thinking with counter-suggestion until he or she is satisfied with the level of the reasoning.

Support System

The teacher is to be well grounded in developmental theory of Piaget and to be equipped with relevant counter-suggestions. A rich and stimulating environment is needed.

Application

This model is applicable to both cognitive and moral development and can be used for diagnosis and evaluation as well as for instructional purposes. On the basis of this teaching model a sample task, designed by the investigators is presented for demonstration.

Task - Transitivity of Weight : This task can be used both in group and in individual situation. If it is to be used in group each child is to be provided with one set of the materials. The task is in dialogue form and the group comprises of 10 second graders.

Materials : Three plastic balls namely A, B, C and a balance having pan. Ball A is heavier than ball B and ball B is heavier than ball C. First the children are acquainted with name of the balls

Each child is provided with two balls at a time and is asked to compare their weight. If a

child fails, the teacher tells how to measure the weight. After this observation, the teacher takes one set of the material and asks the following questions :

- Teacher : How many balls are there ?
Student : There are three balls.
Teacher : What are they ?
Student : They are A, B and C.
Teacher : What is the relationship between A and B? (each child is provided with two balls : A & B and is encouraged to weigh).
Student : A is heavier than B.
Teacher : How do you know ?
Student : By comparing their weight?
Teacher : Are you sure ?
Student : Yes.
Teacher : What is the relationship between B and C ? (each child is provided with ball B & C and is encouraged to weigh).
Student : B is heavier than C.
Teacher : How do you know ?
Student : By comparing their weight.
Teacher : O.K. you have already compared the weight of ball A & B and B & C.
Student : Yes.
Teacher : Can you tell me what is the relationship between ball A and C ? (puzzling situation)
Student : Yes. A is heavier than C.
Teacher : How do you know ?
Student : A is heavier than B and B is heavier than C. So, A is heavier than C. (If a child fails at this stage, the teacher may present all the three balls at a time and conduct the experiment in front of him.)

- Teacher : Are you sure ?
- Student : Yes.
- Teacher : If I make A equal to B, then what will be the relationship between A and C ? (counter-suggestion. If some one fails, the teacher may conduct experiment by making the balls equal.)
- Student : A will be heavier than C.
- Teacher : How do you know ?
- Student : B is heavier than C, if you make A equal to B, still A will be heavier than C
- Teacher : O. K., if I make C equal to B, then what will be the relationship between A and C ? (counter-suggestion)
- Student : A will be heavier than C.
- Teacher : How do you know ?
- Student : A is heavier than B, if you make C equal to B, still then A will be heavier than C.
- Teacher : Thank you.

For transfer phase, a related task may be performed with the help of metal and plastic in balls or blocks. But, the concept (transitivity of weight) will remain same.

All students are to be exposed to counter-suggestion. If a student fails to give proper answer to counter suggestion question, the teacher is to conduct experiment in front of the students. If a student fails to give proper justification to his answer, the teacher is to go back and is to conduct experiment again.

Implementation

To transmit this model into action, a few researches have been conducted by Senapaty,

1985; Passi, Goel, Swarup and Senapaty, 1986; Lakshmi, 1988, Passi and Lakshmi, 1989, Senapaty and Lakshmi, 1990; Passi, Goel and senapaty, 1990. In addition to these, two experimental workshops, directed by Passi et. al. (1986), have been organised at Indore and Hyderabad to examine the effectiveness of this model in classroom situation.

A workable methodology may be evolved to disseminate the essentials of the model into action through a training programme. It consists of four components, such as, describing and understanding, viewing, planning and peer teaching and adopting the model.

For the transmission of this model, necessary changes have to be brought about in the school programme. For teacher awareness, an orientation workshops are to be organised in different region of the country. Mass communication media, SIET programmes, pre-service and in-service teacher training programmes, self-learning instructional packages and parental coaching programmes are to be developed.

In addition to these programmes, low cost teaching-learning materials can be designed from the immediate environment with little effort. Parents and teachers can develop tasks for the concept of seriation, classification transitivity, conservation, measurement etc. with the help of sticks, leaves, flowers, clay, seed and other locally available material.

No doubt, a particular level of physical maturity is a must to do certain logical operations. But, for maximum possible cognitive development at a particular stage, a child should be exposed to systematically 'why' and 'if', 'then' questions. It depends upon the resourcefulness of the educational planners, administrators, teachers and parents.

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The Primary Teacher is a quarterly brought out by the National Council of Educational Research and Training (NCERT), New Delhi. The Journal intends to give to the practising teachers and concerned administrators, authentic information about the educational policies being decided on and pursued at the Central level. It aims at giving meaningful and relevant material for direct use in the classroom. It would carry announcements of programmes, courses of study, etc., offered at various centres in India from time to time. It also provides a forum for the discussion of contemporary issues in the field of education.

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Pedagogy of Peace Education

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The likely consequences of nuclear war have become a matter of considerable public debate. At one extreme, characterised by Jonathan Schell's eloquent book 'The Fate of the Earth' nuclear devastation would be total and irreversible. The resulting breakdown of the earth's Ozone layer would be the final ecological insult causing widespread extinction of almost all higher life forms — leading, in Schell's memorable phrase, to a republic of insects and grass. To avert this danger is not an easy task. We need a careful and systematic effort to protect the mankind from the dire dangers of this advanced scientific development made by man himself.

Einstein once said that mankind is unable to solve the problems it has created if it proceeds from the level of consciousness it had when it created them. This requires a new way of thinking. How can education contribute to conditioning this new thinking? This question naturally calls the importance of introducing peace lessons in our textbooks. In fact, in none of the previous epochs has the question of the purpose of education, the meaning and substance of educational work figured so prominently perhaps as in our days. The rise of a new universal mentality, incorporating the feeling of friendship and trust for other people, the non-acceptance of aggression and respect for the rights and dignity of every person and every nation, requires a colossal moral and spiritual effort on the part of every man and woman in the interests of peace, happiness and justice for all people. But can we adults preach the principles of

peace to our children? Certainly, yes. If anybody says we cannot, we are compelled to call them as remaining captive to outdated views and aspirations. Little wonder that so far we have been unable to come to terms even with adopting a single approach to education in the spirit of disarmament.

We have literally accepted the importance of peace education, but we have done nothing to induct it into our school curriculum and practices. Look at what National Policy on Education 1986 has to say about peace: "India has always worked for peace and understanding between nations, treating the whole world as one family. True to this hoary tradition, education has to strengthen this world view and motivate the younger generation for international cooperation and peaceful co-existence. This aspect cannot be neglected". But no academi-

Developing Writing Skills through Cartoons

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Communicative approach of teaching is now-a-days regarded as a modern technique of teaching-learning phenomenon. Like other techniques, communicative approach of teaching has though sporadically spread over most of the developed countries of the world, practically, it is mainly concerned with certain technical aspects of Journalism – an organised means of communication of news and views, ideas and thoughts, facts and events etc. from men to men throughout the world. With a view to matching up the present day need of specialization in mass communication and allied disciplines, it has earnestly been required to broaden the scope and nature of Journalism.

“Journalism, as Wainwright held, can communicate with as few people as can a classroom news sheet or a parish magazine or with as many as there are in the world.” None can find such a subject where most of the branches of social sciences have been fused. Thus, communicative approach of teaching, if properly imparted, can be regarded as an alternative to the traditional systems of teaching. At the same time it can bring immense benefit not only to the students but to the society too.

Journalistic Style of Writing

What does communicative approach of teaching-learning system mean? It is the pragmatic exposure of mass-media system in the field of education. Imparting lessons on any subject depending on newspapers or allied tools

of mass-media system forms the basis of communicative approach of teaching. Here a student is to acquire the skill of writing articles, reports, comments, etc. for the cause of developing his style of expression. Since journalistic style of writing is absolutely a different creative activity, a student may acquire many of the skills required to be developed by a journalist. Usually, a general writer can use his own fashion of expression but a journalist is to write in an impressive manner avoiding over-writing and over-emphasizing of the fact and incident. He is to write readable and interesting articles, reports, stories, etc. in simple language. He is required to avoid clichés, well-form phrases, jargons, etc. This is because, use of unusual words, though sound impressive carry little weight of meaning. However, a journalist can use technical terms and notations if the

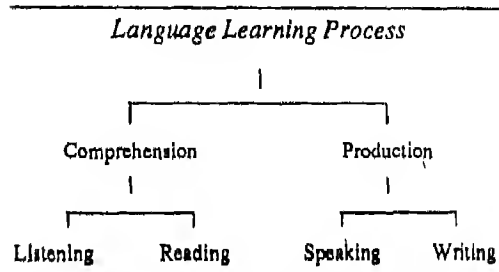
journals be meant for scholars and intellectuals only. For example, the use of mass-energy equivalence relation profounded by Einstein $E = mc^2$ may not be unusual for an article on nuclear fission or fusion process if it is written for scholars only but it will never be befitting if the article be meant for primary level learners.

Since journalism has now been recognised as a psychomotor skill of writing rather than cognitive style of expression, a journalist is also to adopt appropriate approaches in case of other technical aspects of journalism like — interview taking, placement of news, headlines of news, knowledge of using graph, tables, figure and cartoon, etc. Symbolic representations of the news, facts, incidents etc. are significant not only in case of understanding the contents but in use of explanation too. The knowledge of reference writing is an essential quality of a journalist. Usually, three kinds of bibliography are in practice. Bibliography in the form of (i) Reference list at last page, (ii) Footnote on the lower portion of a page, (iii) Reference within bracket on the same line. Now-a-days type (iii) is supposed to be more scientific since it consumes no extra time and energy on the part of a reader. These are some of the essential skills of writing or reporting which may be acquired by a student through communicative approach of teaching learning system.

In view of the above discussion, one may incorporate 'communicative techniques' of teaching processes for developing some qualities like (i) writing skills, (ii) interest about incidents and events of past and present, as well as visiting new places, (iii) ability to mix with different types of people, (iv) adoptability and initiative for independent works, (v) impressive behaviour and (vi) managing capability, etc. in students.

In his language class, a student may be taught how to write correct and simple sentence

following the basic principles of developing language learning process like —



Writing skill may also be developed by generating curiosity and interest about facts and events. For example — the primary exposure to journalistic style of writing may be developed in a student by allowing him to write a report on a fair after visiting the same instead of asking him to write a paragraph on it. Similarly, he may be asked to visit book fair, cricket match, foot-ball match, etc. and to express his experience in simple sentence. Sometimes, he may be allowed to write articles, poems, stories, etc. for institutional magazines too.

An Experimental Evidence

With a view to developing writing skill among the student of classes VII — IX, an investigation was conducted on 20 students of three schools—one in rural area, one in urban area and one Central School. The students were first classified in two equal groups — experimental and control groups, irrespective of their school performance and socio-economic condition of their respective family. The students of experimental group were instructed to write report or stories based on supplied cartoons. The students were however instructed in short the contents of the cartoons. The cartoons were collected from newspapers and journals - local and all-India level. The cartoons were classified primarily in the light of generating interest in adventurous

matters and acquainting the students with national current events. It seems that more than seventy percent of the students were able to write a note or story basing on these supplied cartoons. On the other hand, students of the control group were neither supplied such cartoons nor instructed with the contents of these cartoons. They were however supplied with some captions prepared suitably in the light of the contents of these cartoons. Most of the students failed to develop story or article basing only on the caption.

The same process was repeated by reversing the group of the students and it seemed that fifty percent of the students of previous control group were, however, found to develop the contents of the cartoons in the form of a story or note. On the other hand, five students of the previous experimental group were found to develop story or article basing only on captions which were supplied to the students of previous control group.

Again the students of both the groups were asked to develop story or write article on the basis of supplied outlines prepared in the light of the contents of these cartoons. Five students of the group – A and four of the group – B were found to develop story or write article in accordance with the instruction of the outlines. Best writings of the students of both groups are cited here for reference.

This experiment shows that students can develop story or write article if they are provided with practical guidelines rather than abstract captions or headlines.

Conclusion

From the above discussion, we can conclude that communicative approach of teaching, if properly imparted, can open a vista of knowledge to the teachers and taughts equally. This technique can act as an organised means of promoting not only writing habits among the students but also sharing views and ideas among each other, creating interest even among the tiny students through picture – stories, puzzles, etc. In short, it may act as an alternative approach to the traditional system of teaching particularly in making a student extrovert. Thus, one can find no other method like communication approach of teaching which can be held responsible for generating certain essential qualities like creative personality, language proficiency, analytical mentality, objectivity of understanding, dedication and devotion to the cause of humanity etc. that go into making a student a successful journalist. So, to make communicative approach of teaching 'tangible and effective in the realization of its aims and objective like—

- (i) Utilization of newspapers for educational purposes.
- (ii) Production of quality institutional magazines.
- (iii) Development of the skill of writing or reporting etc; a lot needs to be done particularly in respect of nature, philosophy, pedagogical concepts and methodologies of this new technique of imparting lessons.

Children's Problem Solving Abilities

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Psychologists have acknowledged the multi-dimensional nature of 'thinking' process, such as problem solving, concept attainment, imaginative and creative thinking and decision-making. But, all these wide varieties of cognitive abilities can be more described as sharing a common psychological domain. For a century, there has been a succession of very competent psychologists such as Galton, Spearman, Burt, Thomson and Weshman in Britain and in the U.S.A., Terman, Thorndike, Guildford, Hull, Cattell, Wallach and Kogon who have arrived at more detailed and solid work in the concept of mental abilities.

Teacher educators have long regarded the development of 'problem solving' as an important step in education. It is considered as a desirable educational outcome and particularly because many empirical studies of problem solving abilities in elementary and secondary school have appeared in the research literature over the past fifty years. Problem solving has indisputably become the focus in mathematics and science curriculum. In science, the ability to recall formulas and manipulate them requires for better understanding of a subject. The problem solving process is a interaction between the problem solver and the task of environment. Sternberg (1985) notes that problem solving involves : (a) unsystematic exploration, (b) inadequacy in defining a problem, (c) restricted inferential thinking, and (d) impaired strategies for hypothesis. Problem solving process involves

two stages. First is understanding a problem, it generates a problem or search space (awareness of the problem). The second phase is the search process as transitions between knowledge stages in the problem space. Metacognition is the executive process that guides the search for inconsistencies in arguments and for the implicit assumptions in problem definitions.

Metacognition is children's awareness of their own learning. This is concern of control or regulation of one's own cognition; that is metacognitive skills. Children's metacognitive skills are interpreted in relation to information processing approaches to human thought in which 'the activities of the system are guided by the operations of a control executive, the function of which is to oversee and guide problem solving.' It has been found that metacognitive skilled children use planning, monitoring and regulating

in their reading. According to him metacognition is divisible into three categories : at first-step what the child is thinking about (content). At the second step, how the child is thinking about the content? Finally, we focus on the child's thinking about his own thinking, about the content which is the metacognitive level.

The qualitatively different ways of thinking about learning represent categories on various metacognitive levels. Piaget postulated two levels of logical thoughts : (a) concrete operational period, and (b) formal operational period. Around seven to eight years of age upwards, the child is increasingly able to develop concrete operational. Thought at this level can deal with data that is intuitable, that is 'perceptible' or 'imageable', and permits transformation on reality by means of interiorised action grouped into coherent reversible systems.

Present Study

It is now generally recognised that a nation's future depends on a citizen that can 'think and reason creatively' and deliberately develop sound judgements of information, understand and contend effectively with rapid and constant change (National Commission on Excellence in Education, 1983). Teacher educators urge the development of a curriculum that emphasises higher level of thinking skills. The volume of content to be learned growing rapidly and the problems facing the people are becoming more complex. So, the goal of education should aim at improving the learning of higher level of thinking skills. It is, therefore, the research on problem solving that has been a major concern of educators for many years and has attracted attention of researchers.

The present study is concerned with an aspect of thinking skill namely metacognition ability of children. That is children's awareness of

their own learning or their own problem. The purpose of study is to accomplish two ends :

1. To develop awareness of children's own learning, and
2. To compare two groups to look at the role of metacognitive.

The work reported in the present study shares some points in common with literature reviewed earlier. It also departs from the techniques and assumptions of those writings. The present study is a theory-based attempt to examine the effects upon individual children's problem awareness. It is conceptualised "problem solving abilities".

Objectives

The purpose of the study is to explore the feasibility of an attempt to improve metacognitive awareness of learning in elementary school children and to investigate the impacts of the metacognitive dialogue approach of teaching on the achievement of students in maths. Specifically, the study sought to answer the question whether student's achievement in mathematics differs significantly according to the type of teaching approach encouraged by the teacher.

Basic Assumption

The investigator had assumed that :

- (a) The child conceptualises situation, settings and activities as source for acquiring knowledge. 'Learning by experience' is the metacognitive level of learning.
- (b) Mathematics has little to do with real thinking or problem solving behaviour. Mathematical problems are always solved easily.
- (c) Mathematical epistemology and metacognitive skills are essential

components of competent mathematical performance.

Children's metacognitive awareness was investigated using two groups of experimental design. The subjects were standard children attending a rural mixed Panchayat school in South Arcot district. The children were no previous expose to instruction on thinking skills. A total of 60 students of two sections were selected. From this pool of 30 students were randomly assigned to either the dialogue method or the traditional. The groups were more or less similar to socio-economic status.

Experimental Procedure

The treatments were two methods of instruction. The metacognitive dialogue method and a traditional approach. Two research instruments were designed and validated for the study :

- (a) A course unit to be taught by metacognitive dialogue method
- (b) A 25-item multiple-choice achievement test.

The content taught was a unit 'rules of divisibility' based on a chapter in V standard mathematics textbook (Tamilnadu Textbook Society, Madras, 1982). The investigator extracted most important aspects of the chapter and developed them suited to dialogue method of teaching (appendix 1). The content of the unit was discussed with senior mathematics teachers about the appropriateness of the content for students. The contents of both the dialogue method and traditional method were the same. The content was defined by the objectives stated in teacher's guidebook. A 25 - item, multiple-choice achievement test based on the above unit was constructed and screened for face and content validity. The pre-test was conducted for both groups

The group taught by teacher using metacognitive dialogue was referred to as Group 'A' in the study. Group 'B' included the group, the teacher of the group who instructed students. The teacher of the dialogue group was given instruction by the investigator about which metacognitive dialogue approach to use, how to put into operation and what to emphasize in the execution of the activity. The metacognitive dialogue method was semi-structured form of interview in a similar to Piagetian clinical interview. In group 'A' students were allowed to talk about what they had learnt in different context. The dialogue starts with questions such as what, how, and why he learnt; children were asked: 'Tell me about something you have learnt earlier, followed by 'anything else?' The treatment group then was allowed to work with the topic (simple division problems for one week). On the second time, students were interviewed individually and questions started, "Now, since you have been working on division problem, tell me something you have learnt" followed by "anything else"? The dialogue dealt with other questions like, 'Imagine you are as old as your teacher, and have to teach students all you have learnt when working with the division problems. How would you go about that?' "Isn't there any other way?" The teacher continuously focussed on the children's ideas of learning through the period. The teacher asked the children other kind of questions and to think about why they were doing different activities. At the end of instructions, the investigator readministered the achievement test as post-test for both the groups.

Results and Discussion

The achievement mean scores for each treatment group on the pre-test and post-test are presented in Table 1. The teaching group in 'A' was built on metacognitive dialogue, while the teaching in 'B' was built on traditional method.

Moral Education in India

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School education in India is primarily the responsibility of the States. Diversity rather than uniformity characterizes the curricula of the State school systems. Although, moral education is becoming increasingly prominent in educational discussions, very few of the States have provided for moral education as a subject of study in their schools. This paper provides an account of present position and status of moral education in India including the recommendations of National Policy on Education (NPE 1986) and the National Commission on Teachers -I (NCT) on Value Education.

Since time immemorial religious, moral and spiritual education have been playing a major role in every individual's life. In ancient India, education was conceived essentially as a process of attaining spiritual perfection which constituted the *summum bonum* of life. The ancient Gurukula practised such an educational ideal. With the emergence of secular education under British rule, moral education assumed all importance.

Modern Period

After securing political freedom in 1947, the problem of moral education came to be considered seriously in India. The University Education Commission (UEC, 1950), the Secondary Education Commission (SEC, 1953), the Committee on Emotional Integration (CEI, 1962) and the Education Commission (EC, 1966) have come out with suggestions on moral (and

spiritual) education in their reports and made recommendations thereon.

The appointment of the Committee on Religious and Moral Instruction (CRMI), popularly known as the Sri Prakash Committee by the Government of India in 1959 was landmark in the history of moral education. Recommendations of this committee later endorsed by the Education Commission (1966) constitute the basis of the contemporary moral education programmes in schools of India.

Present Position

In today's context, there is great awareness of the urgent need for education for character building. The official document "The Curriculum for the Ten-Year School: A Framework" released by the NCERT has laid down the objectives of the contents of programmes of curriculum

renewal for the country. This has been accepted by all the State Governments. This documents has the following to say on character building and human values. "The school curriculum should have a core centering round the objective of character building. The best way to do this is to help the child find the right road for his self-actualization and encourage him to follow it—watching, suggesting, helping but not interfering. Self-actualization is a strong need in human beings; but the conditions in which the child lives—its social, mental and moral environment—may not be always conducive for the fulfillment of this need. Hence, attempts have to be made to nurture the child to discover its potentialities. Educational activity should be organised in such a way that always and ever, in each and every task the child is encouraged to express itself and find its best fulfillment."

Increasing concern is expressed every day about the general deterioration in values experienced in contemporary social life and the need for appropriate educational action to meet the challenge. The NPE itself has come out with the declaration that 'In our culturally plural society, education should foster universal and eternal values oriented towards the unity and integration of our people. Such value education should help eliminate obscurantism, religious fanaticism, violence, superstition and fatalism. Apart from this combative role, value education has a profound positive content based on our heritage, national goals and universal perceptions.

It should lay primary emphasis on this aspect.'

The NCT also addressed itself to several questions relating to the value orientation of education and made suitable recommendations. Ideas on what values should be fostered through education has also been expressed in the common core of the national system of education elaborated in the NPE. The core elements will cut across subject areas and will be designed to promote relevant values.

- Our common cultural heritage
- Egalitarianism, democracy and socialism
- Equality of the sexes
- Protection of the environment
- Removal of social barriers
- Observance of the small family norm
- Scientific temper.

The position of moral education differs from state to state as education is a state subject. Nine states and one union territory have made provision for moral education in their school syllabi. They are — Andhra Pradesh, Assam, Bihar, Himachal Pradesh, Karnataka, Madhya Pradesh, Rajasthan, Tamil Nadu, Uttar Pradesh and the union territory of Pondicherry. There is no uniform pattern of moral instruction in these states. Some common features are — developing equal respect for all religions, develop qualities of good citizenship, patriotism, respect parents and teachers, spirit of fair-play, justice, truthfulness and honesty.

Pattern of Moral Instruction

Sl. No.	States	Provision	Teachers	Time	Instructional materials	Examination
1.	A.P.	Separate provision also dealt informally; syllabus prescribed for classes 1 to 10	General teachers	2 periods per week	Books from private publishers	Internal evaluation
2.	Assam	Compulsory for classes 1 to 5 syllabus prescribed	General teachers	2	Textbooks by Textbook Corporation	Internal assessment

Sl. No.	States	Provision	Teachers	Time	Instructional materials	Examination
3.	Bihar	Special syllabus developed by Dept. of Edn. for classes 1 to 6	General teachers	1	No special books	No Examination
4.	Haryana	From 1981-82 importance to moral Edn. has been given in school curricula	Will be specially trained	1	Textbook prepared	Examination subject
5.	Himachal Pradesh	New syllabus prepared and 1981-82 was declared as the Moral Edn. Year in the state	General teachers	2	Special books prepared	Public Examination for 50 marks in Moral Science and Yoga
6.	Karnataka	Compulsory at primary and secondary school stage, syllabus prescribed by the Director of Public Instruction (DPI)	Language and social studies teachers, and teachers specially trained in moral and spiritual education by Ramakrishna Institute of Moral & Spiritual Education Mysore	1	Textbook prepared by the Directorate of Textbook	Internal assessment
7.	Madhya Pradesh	Syllabus prescribed mostly through co-curricular activities	Teachers incharge of co-curricular activities	-	Teachers guide prepared	-
8.	Orissa	Indirect method through language, social studies and co-curricular activities	Language SST & CCA teachers	-	S.C.E.R.T. Bhubaneswar	-
9.	Tamil Nadu	Primary/secondary syllabus prescribed 1 to 3 moral instruction (M.I.) is integrated with history and geography subjects	General teachers	1	No special textbook or supplementary books For H.Sc. textbook prescribed	No examination
10.	Uttar Pradesh	Compulsory for 1 to 12 standards syllabus developed	General Teachers	2 + (1 Yoga class)	Special books for 3 to 12 grade For 1 to 2 classes teachers guide available	Examination subject 50 marks (Theory 30 Pract. 20 (Yogasana)

Sl. No.	States	Provision	Teachers	Time	Instructional materials	Examination
11.	Pondicherry	Provision upto 10 standard syllabus prescribed	Language social studies teachers	1	Extracts from Ramayana, Mahabharata, Panchatantra stories etc. are used	No examination

Objectives and Curriculum

- (i) The objectives of moral education included in modern curricula are to inculcate in children desirable qualities and manners of a good citizen.
- (ii) To inculcate in them the spirit of patriotism and national integration.
- (iii) To inculcate in children respect for parents, teachers and elders in general.
- (iv) To teach them reverence for all life.
- (v) To inculcate in children a spirit of fairplay, justice, truthfulness and honesty.
- (vi) To develop a disposition of cheerfulness and aesthetic sense.
- (vii) To teach values of hard work and efficiency.
- (viii) To develop in children faith in God or in a high spiritual being.
- (ix) To teach them to have equal respect for all religions, and
- (x) To prepare them to lead a useful and constructive life in a democratic, secular and socialist society.

Even in denominational schools where moral education is a compulsory subject, the objectives of moral education are more or less the same as above. In states where moral education is

prescribed as a subject, the real importance assigned to it depends on the attitude of the principal and the teachers. If the pressure of the academic subjects is high, moral education may be relegated to an unimportant place. The time allotted to moral education as a formal subject is one to two periods per week. Besides, about 15 minutes per day are devoted for this purpose in the morning assembly.

The syllabus in moral education is developed keeping in view (i) the present needs of the society, (ii) needs of the growing children and (iii) religious and cultural traditions of the country. Because of its long tradition, religion tends to dominate many syllabi in moral education even though there is no attempt to teach religious dogmas. However, the modern generation is becoming more and more rational and there are occasional conflicts between faith and reason. Attempts are being made to develop programmes in moral education which are more secular in nature and less dependent on religion.

The Committee on Religious and Moral Instruction made suggestions of a broad framework of instruction in moral and spiritual values which have been generally accepted as the basis of moral education programme in modern Indian education. The pattern of curriculum in moral education is more or less on the following lines.

Elementary Stage

- The school assembly should be held for a few minutes in the morning for singing of national anthem, patriotic songs and talks of moral nature.
- Simple and interesting stories about the lives and teachings of prophets, saints, religious and past national leaders should be included in the syllabus for language teaching.
- Discussions in all subjects should be so conducted as to develop children's individual personality and also to bring out the moral content of the subject taught.
- Wherever possible, the interest of the child should be aroused by the use of audio-visual material, such as photographs, filmstrips and coloured reprints showing works of art and architecture closely connected with the main living religions of the world.
- In the school programme, two periods a week should be set aside for moral instruction. In these classes, the teacher should relate inspiring stories drawn from the great religions of the world and other sources and explain broadly their ethical teachings. Dogmas and rituals of religion should be excluded from moral instruction.
- Through school programme, the attitude of service and the realization that 'work is worship' should be developed in the child.
- All schemes of physical education and all forms of play in the school should contribute to the building of character and the inculcation of the spirit of true sportsmanship.

Secondary Stage

- The morning assembly should observe

two minutes silence followed by readings from the scriptures or great literature on an appropriate topics. Community singing should also be encouraged.

- The essential teachings of the great world religions should be studied as part of the curriculum pertaining to social studies and history. Simple texts and stories concerning different religions may be included in the teaching of languages and general reading.
- One hour a week should be assigned to moral instruction. The teacher should encourage the habit of discussion in this class. Suitable speakers may be invited to address the students on moral and spiritual values. Joint celebrations may be organised on the occasion of important festivals. Knowledge and appreciation of religions other than one's own and respect for their founders should be encouraged in various ways including essay competitions.
- Organised social service during holidays and outside class hours should be an essential part of extra-curricular activities. Such service should teach the dignity of manual labour, love of humanity, patriotism and self-discipline. Participation in games and sports should be compulsory and physical education should be a normal part of school programmes.

The programme of social work, socially useful and productive work, NCC, scouting etc., are expected to instil respect for values and regard for character. Thus, co-curricular activities are expected to promote moral and spiritual values in children. The school assembly, the celebration of religious festivals of all religions, work experience, team games and sport, subject clubs,

social service programmes — all these can help in inculcating the values of cooperation and mutual respect, honesty and integrity, discipline and social responsibility. These values have special significance in Indian society today when young men and women are passing through a crisis of character.

Special Materials

A few states in India like — Karnataka, Tamil Nadu and Uttar Pradesh have prescribed special books for moral education. They contain biographies of great men, religious leaders, suitable verses from sacred scriptures of various religions, didactic poems, suitable proverbs and accounts of moral achievement.

Since the general consensus is for a functional moral education, very few school systems are in favour of the direct teaching of morals. Most of the schools are in favour of creating the right atmosphere in which children can mature emotionally. While recognizing the importance of home and school atmosphere for moral development, the Committee on Religious and Moral Instruction held that deliberate, systematic moral instruction in school was essential. Though this view is endorsed by the Education Commission and widely accepted in principle, it has not been implemented in the vast majority of schools in our country.

Teacher Training

Both the CRMI and the EC recognized the need for training teachers in imparting moral education. The EC even recommended that training institutions should prepare general teachers for imparting moral education also. There has been virtually no response, however, to this suggestion from the teacher training institutions in India. The only exception to this, perhaps, is the Ramakrishna Institute of Moral and Spiritual Education at Mysore, founded by the well known Ramakrishna Mission.

The institute which is fully residential offers an eight-week diploma course for working teachers of secondary schools and also a year-long pre-service programme leading to B.Ed. degree with moral and spiritual education as a compulsory specialization method.

The academic programme of the diploma course provides both theoretical and practical work. The theory part comprises 1. Study of the religions of the world with special reference to India (40 instructional hours), 2. A study of the selections from the scriptures of the world religions (20), 3. biographies of great persons (30), 4. Indian culture (25), 5. Training for citizenship and national integration (10), 6. Ethics, including philosophy and psychology of religion (25) and 7. Need, aims and methodology of moral and spiritual education (15). The practical part provides for 'practice teaching' including 'demonstration lessons' for one week, a dissertation of about 2000 words on an approved topic in moral education and an educational excursion. The scheme of examination provides for the assessment of performance in both theory and practice.

The teacher training institutions in the country do not have a well defined course to offer moral education. A couple of units could be identified under the courses on general subjects. For instance, "Philosophical and Sociological Foundations of Education" has reference to character development as one of the aims of education. Again "Trends and Problems of Education" has moral education as one of the problems of education. Apart from these, there is no systematic effort being made to inculcate moral and spiritual values in the trainees and much less in the form of instructional methodologies. The trainees are not exposed to any skill in handling moral education classes. This is precisely the reason why the Government of India in their order No. F. 13 4/80—Schools 3,

dated 23rd May 1981, constituted a working group under the chairmanship of Shri Kireet Joshi to review the teacher training programmes with a view to promoting value education.

In the context of NPE (1986), the National Council for Teacher Education and NCFERT with the help of other colleges of education and university departments have taken up the task of suitably modifying the teacher education programme (at primary and secondary levels) in the country to include value education as an important component.

The private agencies like Ramakrishna Institute of Moral and Spiritual Education, National Centre for Religious and Moral Education under the Catholic Bishop's Conference of India and Sri Sathya Sai Institute, Whitefield, Bangalore, have done commendable work in the area of moral education.

Evaluation Procedures

Evaluation certainly assumes a very significant role in the school curriculum. It maintains an intimate relation with the instructional objectives and learning outcomes. Tools and techniques of evaluation in moral education need to be developed to meet our requirements. In most states, moral education is not an examination subject and no effort is made to assess pupils' development in moral education. As long as moral education has not been given a formal place in the scheme of studies in India, it will not be possible to develop effective evaluation tools. Following are some of the techniques which are generally being adopted for evaluation of moral education in schools :

- Observation
- Anecdotal records
- Rating scales

- Attitude tests
- Case studies
- Self-evaluation
- Peer group evaluation
- Oral testing –quiz competitions
- Interviewing
- Sociometry

Various institutions and educational agencies have been developing their own procedures for evaluation. Some Boards of Secondary Education and State Councils of Education in different states of India have developed schemes of internal assessment. Assessment of personality traits is being done on a five-point scale.

Problems of Implementation

The major problem in many schools, exception apart, about moral education is that these classes are taught less seriously because moral education is not an examination subject in many States. The home still plays the greatest role in moral upbringing of Indian children. Traditionally, these children have been taught to respect their elders and learn from them. In large parts of India, especially villages and small towns, this tradition is still continuing. But there are signs of its weakening in big cities where extraneous influences are more powerful than the combined influence of the home and the school. Present-day parents do not want to be strict towards their children and when such children have enough freedom, as they do in tiny affluent and Westernized sections of the society, many behavioural problems do crop up. Yet, most parents would like their children to grow up in the traditional image of sincere, responsible and conscientious citizens.

Introducing Population Education

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Population education should be considered for inclusion in the school curriculum keeping in view the significance of population dynamics as a matter of great public concern and appropriateness of the subject for the school system. The significance of population changes for current and future economic, social development has come to be understood by leaders and planners in all parts of the world. With the rapid decline in the death rate, particularly for the new born and the young children, and with only limited changes if any in the birth rate, the growth of population in developing countries is taking place at a very high rate. As a result of this, the aspirations of people for a better quality of life is being attained at a slow pace in spite of vigorous efforts at economic and social development.

Increases in production of food, industrial goods, consumer goods and services have been observed to a great degree by the increase in population. In addition, the manner in which goods and services shared by various sectors of a nation is a function of the social structure of a society and is not basically a population problem. It is clear that the aspirations of a large section of the population in any particular country for a better quality of life cannot be attained until significant per capita gains are made. Therefore, any factor which seriously prevents or delays such gains is a matter of public concern. Rapid population growth is generally recognized as a factor in delaying or preventing the per capita gains necessary to raise living standards. The importance of

population control for the immediate and long range, better future of mankind is being increasingly recognized by scholars, public officials and informed citizens all over the world. Any subject of such great public significance cannot be ignored by professional educators.

Level of Knowledge

The knowledge base for the various subject areas in school curriculum is not a fixed or stable unit. Significant increments in all areas of study are made with great frequency. The potential content of population education involves both the social sciences and the life sciences and both of these general areas are particularly dynamic at this stage of intellectual development.

Role of Education

The content to which the educational systems give attention to problems of social significance is essentially a function of national-educational philosophy and orientation. In most settings, the curriculum is organized around generally accepted academic disciplines such as—history, mathematics and biology. In some countries, the basic personal and social problems serve as an organizing base.

In practice, educational system is usually characterized by a mix of these three approaches with the traditional academic subject fields serving as the central feature. Even in those settings in which a strong emphasis is given to traditional fields, attention is frequently given to personal and social concerns through appropriate selection of the content within the subject area and through methods of teaching which relate the content to current concerns.

The field of population education can be adopted to any of these three philosophies. For example, the relevant content can be incorporated within the academic subjects of the social and life sciences.

To appropriateness of the content of population education for those of school age should not be considered as a serious problem. It is true that at the present time in many countries systematic study of population dynamics and related matters is largely limited to higher education in fields such as—economics, sociology, geography, biology and other life sciences. However, this does not preclude its introduction at the elementary and secondary levels since curriculum specialists frequently draw on bodies of knowledge which are taught in a more comprehensive and complex manner at the higher education level. For population educators, the problem is not that of the inherent complexity of the subject

matter but rather one of creatively selecting the salient concepts and organizing the approach in a fashion to insure that young learner sees the significance for himself as a person and as a future citizen.

The specific aspects of proposed new subject area are most appropriate for the school system. The following elements need to be considered for any new curriculum :

Nature of the learner : A basic point of departure is that the learner is a member of the population and is expected to be a parent some day. He brings to the school a set of attitudes and values concerning such areas as—age at marriage, size of his own future family, whether it can be planned, what he thinks of as a large or small family and perhaps whether unlimited growth of his community and nation is a positive or negative value. His attitudes in some of these areas have a strong affective quality. Systematic research on these problems would of course, be of great value in relating the contents to the learner.

Characteristics of relevant bodies of knowledge: The various subject areas in the school curriculum differ in the nature of the content involved. Some content areas are highly developed and some are less developed. Some are relatively abstract and rely a great deal on symbols and others are much more concrete. In areas such as—sociology, economics, political science, anthropology, there is less common agreement among scholars on a large set of basic propositions than in the physical sciences. This may account in part for the fact that social science disciplines are taught less frequently at the school level. The highly sequential character of instruction in mathematics provides a setting in which increasingly complicated mathematics content can be presented through use of population data. Human reproduction has been systematically excluded from many school texts

in the past but this practice is changing and many new books include this aspect of population education.

Ecology : The study of man's relationship to his natural environment is increasingly being recognized—particularly in parts of the world where extensive alteration in the natural environment has taken place as suitable materials for courses in the life sciences. Population education can be presented as a significant area of ecological study. This is the most neglected area.

Family life and sex education : These areas of study have been introduced into curriculum in some countries. They are usually presented with a problem focus rather than organized around traditional fields of study. There should be a good basis for infusing population education into these subject areas if they are a part of the present system.

Strategies

The strategy involved in effecting a change in the curriculum is a function of both the content of the innovation and the general structure of the education system. The content poses several problems in population education. This is a new field, it is potentially controversial; trained leadership for this field may not be available and it is more complicated to infuse content at various places in the curriculum than to introduce discrete self contained courses.

The general structure of the individual education system is a factor in the determination of the strategies which may be used. For example, the approach used in a highly centralised national system of education will be necessarily different from the strategies involved when control of education is largely at the local level. Similarly, some national systems have an effective research, development

and inservice education mechanisms which can be used to develop and introduce population education. Other structural features that will influence the selection of strategies include the degree of stability of the system, the degree of politicalization, the commitment of the leadership to innovation and the general moral of the teaching profession.

Although the sequence and timing will have to be determined in the light of local circumstances and resources, the following specific actions should be considered.

An assessment should be made of scholarly work available concerning the knowledge of and the attitude towards population and related areas of teachers and students. New research studies may be required to fill in the major gaps in the state of knowledge. A careful review of what is now being taught should be made. This should include attention to both explicit content and to implied value. If curriculum reform projects are already underway in content areas of the curriculum in which population education might be incorporated, it is important to explore the advantages to be gained in becoming part of such projects. This is of particular importance if the decision is made to introduce population education by infusion of content in regular courses of study rather than as a self contained course. The use of a pilot project to perfect a new approach before introducing it on national basis has been a widely accepted practice. This is particularly appropriate for self contained instructional units since the evaluation process is relatively easier in such circumstances. An infusion-approach to population education seems to be more appropriate and, therefore, special adaptation to the pilot project method may be required.

Introducing population education is in one sense a technical problem in which such issues as the selection of appropriate materials into

the curriculum are involved. However, such a change is also a political process. Education leaders and teachers must be convinced that the proposed changes are desirable and feasible.

The involvement of the professional educational organizations may be helpful, not only in building support for changes but also assisting the development of substantive aspects of the change.

Since population education is a new field in educating the availability of professional personnel competent to provide leadership may be a problem. Although, consultants may be able to assist in developing the programme, leadership from within the national education system is essential. Specialized training for

potential leaders who want to assume responsibility for the new area may be necessary. In general, it is probably better to select personnel who are familiar with and committed to the formal education system and provide them with the necessary supplementary training rather than to select individuals who have background in the substantive field of population but are not experienced in educational planning and administration.

Thus, the strategy adopted for implementation of population education should follow certain basic steps. A curriculum design and appropriate instructional materials would have to be developed, administration support would have to be provided and some type of evaluation system would have to be instituted.

Teacher Training and Value Education

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The effectiveness of the educational programme is determined to a large extent by the quality of teaching. Therefore, identification of qualified and able personnel constitutes major problem of all the educational concerns. In the entire educational structure, primary education is the foundation stone for the progress and better achievement of educational output. No doubt that the teacher education in India is gaining momentum. As Adaval and others (1983) mentioned that the present system of teacher education in India as a specialized activity tries to equip the prospective teachers with knowledge, attitude and skills for effective role performance in the society. But, unfortunately primary teachers' training institutions are still providing training traditionally.

At present in Uttar Pradesh, there is a provision of training for primary teachers. The training of BTC course is of two years duration. In such training courses, selection is not made on the basis of any psychological tests. So, one can not emphatically say that those who are appointed as the primary school teachers have got the right attitudes towards teaching profession and their values and aspiration are befitting to the nature of education. Therefore, it is important to find out whether this training is fruitful to bring healthy changes in values, attitudes and aspirations of the pre-services teachers. Many investigations carried out by Hale (1954), Symonds (1954), Buch (1959), Adaval (1953), Pal (1966), Koskenlomi (1969), Bellucci (1970), Verma (1971), Mohrotra (1973), Kaul (1977), but the findings of their

studies are, however, conflicting and no generalization of any kind is possible. This calls for further research in this area.

The sample of present study consisted of 160 (130 male, 30 female) prospective teachers of BTC training institution of Varanasi and Allahabad districts. These institutions (Total 7) were selected on the basis of census method, 4 institutions belong to Varanasi district and 3 belong to Allahabad district. Tools used for the study—

- For attitude, teacher attitude inventory (TAI) by Ahluwalia (1978).
- For value, personal value questionnaire (PVQ) of Verma & Sherry (1973).
- For level of aspiration, (L.A) coding test of Ansari & Ansari (1963).

Procedure

All the three tests were administered twice. Firstly, on entering the BTC training course and secondly at the completion of a two-year BTC training course. Mean score—attitudes, values and level of aspiration of pre and post

tests have been compared by applying 't' test and measuring significance of difference. (Tables 1, 2 and 3 present the significance of difference on attitudes, values and level of aspiration of pre-service primary teachers),

TABLE 1
Significance of Difference between Mean scores on TAI of Pre-test and Post-test of Pre-service Primary Teachers

S. No.	Factor of TAI	Pre-test N = 160		Post-test N = 160		r	't'	p
		Mean	S.D.	Mean	S.D.			
1.	Teaching profession	39.33	7.36	40.43	7.11	.15	1.47	n.s.
2.	Classroom teaching	37.43	6.56	38.61	5.67	.37	2.20	*
3.	Child-centred practice	41.38	6.90	42.20	2.26	.24	1.28	n.s.
4.	Educational process	41.56	7.31	42.55	6.66	.41	2.81	**
5.	Pupils	36.54	6.80	37.42	6.03	.52	1.78	n.s.
6.	Teachers	39.28	6.92	39.59	6.75	.85	1.05	n.s.
7.	Total Attitude	235.25	30.44	24.29	27.06	.44	1.62	n.s.

n.s. = Not significant

* = Significant at .05 level of confidence

** = Significant at .01 level of confidence

Table 1 shows that the mean difference between the scores of pre-test and post-test on two factors of TAI namely, attitude toward classroom teaching and educational process are found significant. Mean difference on attitude towards classroom teaching is significant at .05 level and towards educational process is significant at .01 level. Mean difference on other factors like attitude towards teaching profession, child centred practices, pupils, teachers and towards total attitude score is not found significant at any level.

The findings of the present study support Symond's (1954) findings who concluded that methods and procedure learnt during college preparation may influence teaching superficially

but they do not determine the nature of relation of a teacher to his students or the teacher's basic attitude with regards to teaching. Kaul (1977) also interpreted that the favourable attitude of student teachers towards teaching does not increase significantly in magnitude with the existing pattern of teacher training. Findings regarding the attitude towards child-centred practice and towards pupils, as obtained by the other researchers are contrary from the present findings. Verma (1968) found that the influence of teacher training programme on the attitude of student teachers towards children and school work had been consistently favourable. Loree (1971) as stated earlier, found desirable change in student teacher's attitude towards himself and his pupils.

Further, the higher mean scores of post-test on attitude, towards classroom teaching (pre-test mean 37.43, post-test mean 38.61) and towards educational process (pre-test mean 41.56, post-test mean 42.55) indicate that the influence of teacher training programme on the attitude towards classroom teaching and towards educational process of pre-service primary teachers is favourable.

Table 1 also indicates that there is no significant difference between the mean scores of pre and post-test on table attitude of pre-service primary teachers. Though the mean score of post-test on total attitude score is higher (mean 240.29) as compared to pre-test (mean 235.25). On the basis of these findings, it cannot be concluded that the attitude of pre-service primary teachers changed during the teacher training programme because statistically

mean scores do not differ significantly. A study by Hale (1954) revealed little change in a wide range of attitudes of student teachers. Ekluno (1984) found that attitude did not change significantly across the education sequence.

The findings of the other researchers obtained contradictory results of impact of training on attitude change. On the basis of the present findings, it may be stated that BTC training course revealed very little change in a wide range of attitudes of pre-service primary teachers.

Table 2 shows the significance of difference between mean scores of pre and post-test of pre-service primary teachers on ten values, viz., religious, social, democratic, aesthetic, economic, knowledge, hedonistic, power, family prestige and healthy, respectively.

TABLE 2
Significance of Difference between Mean Scores on Values of Pre-test and Post-test of Pre-service Primary Teachers

S. No.	Values	Pre-test N = 160		Post-test N = 160		r	't'	p
		Mean	S.D.	Mean	S.D.			
1.	Religious	4.79	1.62	4.86	1.73	.56	.59	n.s.
2.	Social	4.77	1.87	4.42	2.03	.38	2.08	*
3.	Democratic	5.32	1.62	5.41	1.67	.41	.66	n.s.
4.	Aesthetic	5.51	1.94	5.22	1.76	.41	1.89	n.s.
5.	Economic	6.	1.65	5.75	1.89	.27	1.53	n.s.
6.	Knowledge	5.13	1.90	5.50	1.83	.40	2.32	*
7.	Hedonistic	6.51	1.78	6.56	1.72	.33	.31	n.s.
8.	Power	6.56	1.84	6.73	1.88	.29	1.01	n.s.
9.	Family prestige	5.03	2.37	5.25	2.13	.26	1.06	n.s.
10.	Health	5.41	2.05	5.88	1.94	.29	2.54	*

* Significant at .05 level of confidence

** Significant at .01 level of confidence

n.s. Not significant

It is evident from table 2 that the significance of difference between mean scores of pre and post-test is not significant on any value except three i.e. social, knowledge and health. It is

significant at .05 level. Table 2 also reveals that the mean scores of the knowledge and health values of pre-service primary teachers increased after two years of training (mean

score 5.13 to 5.50 of knowledge and mean 5.41 to 5.88 of health value, but the mean score of social value decreased after training (i.e. mean 4.77 to 4.42).

Verma's (1968) findings are quite contrary to the present findings. He found that student teachers lost significantly on theoretical value and improved on aesthetic value. In the hierarchy of values pre-service primary teachers scored highest on power value and lowest on social value after two years of training course. The results of the present study are partly in agreement with the study by Pal (1966), who concluded that out of four professions of

engineering, law, medicine and teaching, student teachers obtained highest rank on political value and lowest on religious value.

On the basis of the present findings, it may be concluded that basic training is fairly capable in modifying the knowledge and health values. On the other hand, lower mean score on social value indicates the confinement of the trainees in their training course.

Table 3 presents the significance of difference between mean scores of pre and post-test on level of aspiration of pre-service teachers.

TABLE 3

Significance of Difference between Mean Scores of Pre and Post-test on Level of Aspiration of Pre-service Primary Teachers

Pre-service Teachers	N	Mean	S.D.	r	t	p
Pre-test	160	+48.42	*41.46	.18	.02	n.s.
Post-test	160	+48.32	*49.44			

**Note*

The S.D. of pre-test and post-test scores on level of aspiration is very high. It is so because the G.D. scores (goal discrepancy scores with algebraic sign) vary from -1 to +478. Table 3 reveals that mean goal discrepancy scores (G.D.) with algebraic sign of pre-test and post-test of pre-service primary teachers are positive (i.e. +48.42 and +48.32). It indicates that before and after training pre-service primary teachers tended more or less consistently to keep their goal higher than the preceding performance. This indicates their high level of aspiration.

Table 3 indicates that there exists no significant difference between the mean scores of pre and post-test in level of aspiration of pre-service primary teachers. However, before training the mean score of level of aspiration has been found slightly higher than that after training. It also indicates that training did not produce any favourable impact on aspiration of pre-service primary teachers.

There are several factors in the social environment which affect learners' level of aspiration of which evidence was found by Chapman and Volkmann (1939), Hertzman and Festinger (1940), Festinger (1942) and by

Hansche and Gilchrist (1956). These investigators concluded that in a social situation the performance of others in group exerts a strong influence on the level of aspiration.

Conclusion

It appears from the present findings that BTC training did not create favourable impact upon attitude towards profession and aspiration of the pre-service primary teachers. It is the social climate which in ultimate analysis is responsible for shaping the attitudes, aspiration pattern and values of pre-service primary teachers.

Motivation in Adult Education

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Lack of adequate motivation has been one of the major problems in implementing adult education programmes. The need for tackling the problem was well gauged and necessary in-built changes were made in the National Adult Education Programme (1978), Mass Programme for Functional Literacy (1986) and National Literacy Mission (1988). Yet the problem of lack of sufficient motivation is continuing. Due to dearth of motivation, the adult learners are not evincing interest in the programme, the elite community is not actively participating and the functionaries are not working to the extent expected of them. Wastage of financial, human and other material resources is continuing. Unless and otherwise the problem of motivation is solved in a clear way, it is not possible to implement adult education programmes successfully. Hence, the problem of motivation needs to be viewed scientifically in order to evolve suitable solutions.

Motivation is considered as a process of arousing, sustaining and regulating activity. It is concerned with the inculcation and stimulation of interest in the learners in various learning activities. It directs and integrates behaviour of the individuals. It is an energizer, a stimulator and a sensitizer in general life situations to undertake the activities. It is an inspirer and a source to perform the things. It refers to the 'why' part of our behaviour. It is an urge to learn and also the 'royal road to learning'.

The nature and role of motivation as perceived by psychologists is as wide as man's life itself. It is conceived as the driving,

balancing and activating force in man. It is the motivation that prompts man to learn; achieve new things; prosper and better his life; helps to keep pace with the world around throughout his life span; allows to excel himself and allows to achieve many of his life ambitions. In the context of adult education, motivation refers to the creation of a desire in the adults to learn. It is a process that can instil in the illiterate persons a desire to acquire the rudimentary skills of reading, writing and arithmetic, social awareness and functional skills. It starts with the enrolment of adults to learn and continues till the adult learners achieve the above knowledge and skills over a period of time.

Types of Motivation

Motivation can be broadly classified into two types namely—intrinsic motivation and extrinsic motivation.

Intrinsic Motivation : It is a state in which the individual wants to do or learns for himself. It is the behaviour which arises from within the individual. A person who is intrinsically motivated will perform the activity in a better and satisfying manner. There will be genuine interest and urge in the person to do the activity. This motivation will create spontaneous interest and sustains the same throughout.

In the context of adult education programme, it is the illiterate adult learners, elite community and programme functionaries who should be motivated to achieve the success of the programme. As far as the adult learners and community are concerned, intrinsic motivation can be created in them through the explanation of the advantages of literacy, their role in the programme and by making the programme learner-oriented from all directions. A better organisation of public rallies, mass campaigns, slogans, open air theatres and mass media (radio, TV, cinemas, newspapers, wall papers, sign boards, etc.) will lead to the voluntary participation of adult learners and community in the programme. Better and cordial relations of the top level programme functionaries with the lower cadres, their appreciation, guidance and direction, pre-service and in-service training can create intrinsic motivation among the functionaries.

Extrinsic Motivation : Here it is through some external pressure that the individual is motivated and acts accordingly. Similarly, the source of pressure does not lie within the individual. Through some rewards, awards, etc. the individual is motivated to do the activity. However, extrinsic motivation is inferior in

relation to intrinsic motivation. Intrinsic motivation appears to be the best in adult education programme. When intrinsic motivation is not found, extrinsic motivation should be opted as an alternative. Extrinsic motivation can be created among the learners by providing opportunities for higher learning, employment facilities, job promotions, credit facilities, subsidies, distribution of fertilisers, new seed varieties, tailoring machines, income generating units, such as—poultry, dairy, fishery units, awards, rewards, certificates, etc. The community elite can be motivated extrinsically through certificates and rewards. The programme functionaries can be motivated through financial incentives, awards, rewards, permanency of appointments, etc.

Motivational Approaches

The success of the adult education programme mainly depends upon the effective learning of adults. A wide range of approaches are necessary to motivate the adult learners depending upon the nature of persons, their motives, needs and interests. These approaches may be categorised as (1) friendly approach, (2) participatory approach, (3) need-based approach, (4) problem solving approach, (5) achievement approach, (6) media approach, (7) instructional approach, (8) deficiency approach, (9) curriculum approach, (10) vicarious approach. These approaches are suggested based upon the experiences of several field functionaries.

1. Friendly Approach : It is the most widely used one in general situations to improve rapport, to present the information, to exchange ideas and knowledge without affecting the ego of the others. Use of this approach in adult education situations will help to give equal respect and treatment to adults and to please them by starting conversation about their welfare, children and family. This will help the

adults to come out freely with their thoughts and needs. This method is especially useful in explaining the adult learners about the programme individually and as a group, to acquaint and secure their full co-operation and to get objective data in the field surveys. Most of the personal obstacles, wrong assumptions, social stigma and programme deficiencies can be tactfully solved and the attention of adult learners can be drawn in an easier way through this approach.

2. Participatory Approach : The adult learners are the beneficiaries of the programme. They can be involved at various stages of the programme namely—planning, management, mobilisation of resources, co-ordination, monitoring and evaluation. If the programme functionaries can increase the participation of the learners by giving due recognition to their age, status, knowledge and acquaintance with others, naturally that will create a confidence in them to participate in the programme.

3. Need - based Approach : The adult education programme emphasises upon catering to the varied needs of adults. If the functionaries of the programme can meet the needs of the people or show the appropriate ways to meet their needs through other agencies, naturally that will increase their confidence in the functionaries. Hence, it is essential to understand the needs of the adult learners. Their needs are often related to health, agriculture, family welfare, animal husbandry, environment, etc. When their needs are satisfied, they will participate in the programme willingly and effectively.

4. Problem solving Approach : Adults though illiterate, are members of the community and have varied problems from dawn to dusk. Their problems are often related to financial and non-financial matters. They are related to agriculture, filling up proformas, contacting

and getting benefits from banks, co-operative societies and other financial institutions. If their problems are solved they get interested and participate in the programme.

5. Achievement Approach : Happiness is often related to success in day to day activities. When we achieve something by putting forth our efforts, naturally it results in a sense of personal accomplishment. Similarly, if the adult learners are informed about their stage in the learning activities from time to time, naturally it leads to their motivation to put forth better efforts for further learning.

6. Media Approach : Media can play a vital role in enlightening people and in drawing the attention of the adult learners. The traditional media like—folk songs, puppetry, Harikathas, burrakathas, etc., have a rich cultural value and these can be used to stimulate the adult learners. The modern media like—radio, TV, newspapers, educational films, etc., have a long lasting value in transmitting the messages and in creating public consciousness. Skillful selection and use of the media suitable to the adult learners needs and interests will unquestionably make major contribution to their further development and learning.

7. Instructional Approach : The instructor is the front line worker in the adult education programme. His rapport with the learners, selection of the place and time for teaching, catering to the requirement of adult learners and laying stress upon learning rather than teaching, his personal commitment and concern to make the illiterate adults literate, his way of presenting the things in a sequential manner, his weightage to adult learners age, experience and appreciations, his ability to create a favourable environment for launching of the programme through public meetings, personal contacts and cultural activities has much bearing in motivating the adult learners.

8. *Deficiency Approach* : This approach lays emphasis on filling up the knowledge gap with regard to the requirements of adult learners. Adults though they are illiterate have an understanding of society, mode of dealing with the official, neighbour, etc., and their own ways of calculating the house hold expenditure and other income and cost aspects. Yet, their methods seem to be crude. Modern civilization requires incisful, accurate, timely, logical, and knowledgeable ways of doing the things and dealing with the people. The knowledge deficiencies of adults in terms of democratic living, ways of generating income, uses of literacy, agriculture, etc., should be filled in by programme functionaries, functionaries of development departments—(agriculture, health, animal husbandry, industries, etc.), local leaders and other elite members of the society.

9. *Curriculum Approach* : Curriculum refers to the organized whole of learning experiences intended to bring out the desired changes in the learners. Simply, it refers to the teaching/learning materials provided to the adult learners. The teaching/learning materials intended for the adult learners should be attractive, need-based, time-bound, diversified, relevant, flexible and systematic in all aspects of organisation. The letters, the get-up of the primers, usage of local language, pictures, slogans, meaningful sentences etc., can make the adults duly motivated to learn. They can inspire, strengthen, stimulate and widen the intellectual horizons of adult learners and simultaneously help them to acquire literacy skills. They must also be able to impress the adult learners to continue their learning after the acquisition of rudimentary skills.

10. *Vicarious Approach* : This approach emphasises upon the sharing of experiences by

the field functionaries. In some areas the programme would have achieved highest success, in some areas it would have achieved moderate results and in some areas it would have been far below from its expectations. Necessary provision through in-service training programmes, publication of success stories and providing opportunities for interaction of illiterate adults with successful learners, will help the functionaries to channelise their efforts in a particular direction or to innovate new methods to motivate adult learners.

To conclude, adequate motivation of adult learners, community and programme functionaries is crucial for the success of the programme. Success should be laid on motivating the programme functionaries as they, in turn motivate the community and adult learners. Further, every attempt to improve the programme should be motivated to feel their responsibility to participate in the programme effectively due to the urgent need to make more people literate and to create necessary conditions for their learning. In addition, motivation is situation specific in its nature and has a wider scope in the context of adult education programme. Adult education is field-oriented experiment and requires a lot of imagination in its implementation. The motivational types and approaches should be given adequate priority. It all depends on the functionaries of adult education whose main function is to motivate adult learners for their effective learning. Hence a broader understanding and analyses of the aspects dealt with will be of immense help to the adult education functionaries to delineate appropriate strategies to motivate the adult learners and the community and thereby for the success of the programme.

Low-cost Teaching Aids

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The teaching aid plays most effective part in the educational methodology. The role of teaching aids is well established in the teaching-learning process. The teaching aid may be— a chart, a model, a picture, a specimen or the modern sophisticated technology like— slide, films, TV, VCR, etc. the selection of the type of the aid depends on the best judgement on the part of the experienced teacher. The use of the teaching aid develops concentration, gives the scope for observations and experimentation, the teacher also finds easier to develop the concepts among the students with the help of aids. Precisely, the use of aid promotes the active participation of all the senses in the teaching learning process.

The concept of low-cost teaching aids is taken on par with the concepts of teaching aids. Thus, the role of low-cost teaching aids is not fully and properly estimated. It is mostly underestimated in contrast to the objectives of teaching aids.

The concept of low-cost aids arises out of the use of local resources and local technology, including the involvement of local persons. It is considered as cost little or not at all, made from the material available in local environment with the active participation of teachers, students and local craftsmanship.

So, the significant roles played by the low-cost teaching aids can be classified into three different co-related factors :

- Cost of the aid
- Utilization of naturally available waste materials from local environment

- Active participation of teachers, students and local artisans.

The objectives of this paper is to highlight the role of the low-cost aids in the above mentioned areas.

The low cost is the essential factor in the process and it is closely related to the other two factors. The minimisation of the cost of the aid is naturally the outcome and the consequences of the other two factors as it involves the use of local material or very less is paid toward the cost of material and secondly it uses the workmanship from the local persons.

But, it is to be noted that the utilization of the waste material or easily available local material is not an easy task. It requires the originality and indigenous potentialities of the teachers, students and local craftsmanship involved in the process.

Let us isolate all other factors involved in the process. In the beginning, we concentrate our discussion only on the cost factor and study its various characteristics :

- (a) In our country, we maintain mass educational programme. Most of our schools do not possess essential teaching commodities and very less attention is given in purchase of teaching aids. In such poor state of our school, the cost of aids plays an important role. This point emphasises the need of the low-cost aids.
- (b) Due to the low-cost, there is no worry of security or fear of losing the item. It is our common observation that the science kits furnished to the primary schools are rarely used. They are not displayed in the classroom. One of the reasons is the fear of losing them.
- (c) The utility of any aid or model depends on the cost of the aid. The cost factor and the utility of the aid are complimentary. If the cost is less then the frequency of the use of any aid or model or device is found to be more. The high-cost sophisticated materials are not in constant use due to fear of handling and damage. The authorities also do not encourage to use such costly materials and entrust them to the student.
- (d) It give the scope for improvisation, which is the ultimate goal of education. The creative involvement of the student in learning process will be encouraged with the use of low-cost available material. Innovative activities are hampered due to the high-cost of the materials required. Most of the students cannot afford to purchase such equipments or else the authorities cannot furnish them for lack of funds.

Thus, the innovation developed by using low-cost material helps to bring the idea into concrete shape and activates the creative process.

The point can be clarified as follows. Innovative concept is developed in the mind, when one goes for the fabrication of it he feels conscious about the cost factor, as the success of the concept is not sure. And thus, most of the time he does not dare to go for its fabrication. If he could develop the concept with the use of low-cost material, he will not find it difficult to go for fabrication. Proper awareness and training should be imparted in that direction.

There are many agricultural and industrial waste materials like—match boxes, milk bags, plastic bottles, PVC pipes, tooth-paste caps, bamboos, broomsticks, ball-pen refills, injection vials, etc. which can be used to develop many devices and useful aids showing all the necessary concepts and functions of the devices.

The PVC pipes, albo-connectors, tooth paste caps, balloons, etc. can be used to show the working of water pump. The construction of the water pump, one of the items developed by author, is given in last for reference.

However, the use of such materials requires great experimental skills, originality and creative talents. The use of tooth-paste and balloon to produce the value of the pump is achieved only through the interaction of creativity and experimental skills. Besides this, the other important aspects involve in the use of local waste material can be summarised as :

Easy to Fabricate : The articles like plastic or PVC pipes can be easily cut using a hack saw blade or a shaving blade. The holes can be made by using heated nails. The parts can be joined together by using local adhesives or tapes.

Avoids the Use of Sophisticated Tools : Most of schools cannot afford to purchase sophisticated tools. But local material can be easily worked with the use of local tools like hammer, hack-saw blade or shaving blade, scissors, needle, cork bores, chisel, etc. The innovator can make available such tools from local craftsman.

Reduce the Labour and Time : The appropriate use of the material reduces great labour and time in the fabrication of the device. The use of tooth-paste cap to prepare the valve saves lot of labour of fabrication. It is observed that certain sizes of the cap exactly fit the PVC pipes.

So it is the search of waste material and its appropriate use that plays the important role in the process of development of low-cost device.

All the above factors encourage further promotion of learning and original potentialities, as it is simple, easy and gives quick results. Thus it develops a sense of pride of achievement and encourages further involvement in the process.

The active involvement of teachers, students and local artisans is the third important area.

Its major advantages are :

- It co-ordinates the three different communities
- It provides the scope for open mindedness, dignity of labour.

The involvement of the teacher and student in the process of fabrication encourages frequent use of the device. Lack of participation discourages the use of aids and this is one of the causes of the failures of the science kit-box supplied to the primary schools.

Involvement in the process of construction of device makes the concept of working of device most concrete.

In case of the ready-made devices, the teachers could not detect even minor faults in the working of device.

As an example, the author wishes to mention the faults in the wind vane supplied through the science kit-box. The base of wind vane was very light so it could not stand in the wind breeze. Similarly, the axis of arrow (pointer) was not at the centre of gravity, thus it could not work even in the strong wind breeze. The teachers could not detect these minor faults as they were not involved in the process of construction. They could not understand the concept of function of each part of the device. When the teacher prepares the device, he is aware of the functions of each part of the model.

The scope of the low-cost aids can be summarised as follows :

- The skill of experimentation and fabrication is developed
- Encourages innovations in education
- Develops confidence and skill in handling the tools
- Encourages the expression of creative abilities amongst the younger generation
- Develops broader outlook
- Stimulates interest in subject
- Initiates the search for knowledge, does not confine to the syllabus and text book
- Develops dignity of labour through community involvement

- Motivates for further reading and investigation
- Makes the learning perfect, and
- Gives scope for leisure time activities.

Many educational observers consider the low-cost aids as just a substitute to the teaching aids available in market. This is under-estimation of low-cost aids, which is clear from the above discussion. The low-cost aids have a great scope in educational process, in one way it helps the way of learning. So, even the introduction of more and more sophisticated aids like TV, VCR, etc. in educational technology in future, the low-cost aids will also play the vital role.

The process of preparation of low-cost aid is not easy. It needs great experimental skill and potentialities. It can be achieved by different ways like :

- The in-service training through the workshops
- The involvement of voluntary and non-government educational organizations
- Use of communicating media like— films, TV etc.
- Publishing the manuals in regional languages for teachers and students.

The Department of Teaching Aids of NCERT has its programme in the propagation and development of low-cost aids. But it is at a very limited scale. It is not reached at the grass root level. The manual of low-cost teaching aids published by Central Institute of Educational Technology, NCERT, describes the construction of the aids. But the functions and essential concepts are not explained. This may lead to mis-conception of the aid.

In one of the workshops on the low-cost aids, the author observed that one of the

participants demonstrated the aid on the expansion of liquid by using a bulb and tube.

In the demonstration, the bulb was not completely filled by water. In such case the liquid rises in the capillary tube due to vapour pressure. However, the demonstrator was explaining the concept of liquid expansion.

The other point worth to mention : the aid should be of permanent nature. In one of the science exhibitions, a participant had prepared a nice globe made of water-melon. (water-melon is not durable) In such case, the labour and valuable time is wasted and the aid has no use in the teaching process.

The use of the low-cost aids should not be over emphasised at the cost of any laws or principles or concepts in science or any other subject. At the same time, the students should be trained to use the sophisticated tools and apparatus at the proper stage of their educational career, as our generation could face the new challenge of modern society.

Water Pump

Objectives

- To study the working of water pump
- To study the function of a valve

Material

- Two PVC pipes of 1m length of sizes 1.5 cm and 2 cm diameter (one exactly slides inside the other)
- Albo connector of 1.5 cm diameter pipe
- One small piece of 10 cm of 1.5 cm diameter pipe
- 2 tooth paste caps of sizes fitting the above pipes
- Two balloons (small size)
- Two pins
- Fevicol

Preparation

- Take two PVC pipes of 1.5 cm and 2 cm diameters each of about 1 m long
- Take two tooth paste caps of different sizes so that they fix the above pipes
- Make openings in the tooth paste caps so that the water will flow from one end to the other.
- Pass the balloons over the caps and fix them with faviicol
- Cut the closed end of balloons
- Fix the caps to the ends of the pipes with faviicol and pins

— Pass one pipe into other

— Fix the ribn connector and pipe piece to the inner pipe

Applications

— The caps and balloons act as valves

— They allow the water to flow in one direction only

— The end of the pipe is kept under water and the inner pipe is moved up and down. The water will rise up and will flow from the upper end.

Approximate Cost : Rs. 4

Preparing Self-learning Modules

SATISH KUMAR

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Mount Abu (Siroli) Rajasthan

There are a lot of primary schools in India. These schools do not have enough funds to procure equipments, because the contingency money given to them every year is very meagre. Such fund is inadequate to meet even the basic necessities of the school in terms of chalksticks, brooms, water pots, dusters, etc. and there is hardly any money left to purchase the materials for teaching aids. Blackboards and textbooks are only the educational materials in these schools. On the other hand, the surroundings of these schools are rich with waste materials such as—bamboos, empty match stick boxes, used cycle spokes, fused electric bulbs, cans, shells, empty boxes made of wood, cardboard, plastic, metal, bangle pieces, bird feathers, etc. But these materials have not adequately been utilised in the teaching—learning process by the teachers as teaching aids to make learning effective, comprehensive and fascinating.

In present times, the importance of teaching aids has been increased to such an extent that without them teaching cannot go properly. Because for small boys, self-learning kits are as important for learning as books to the elder boys. According to Illich, "most learning is not the result of instruction. It is rather the result of unhampered participation in a meaningful setting." So, teachers must provide environment to students for learning considering the Chinese proverb—"If you give a starving person a fish today, he will eat it only today. But if you teach him how to catch a fish, he will eat it for ever." Moreover, this should be

the motto of a teacher while teaching his students and it is possible only to provide self-learning kits to the students and these kits can be produced by the nearby secondary schools which are the centres of school complexes. Because the teachers of those schools can get such kits prepared by secondary students on account of using waste materials by them in preparation of some articles under SUPW. In this way, self-learning kits (goods) prepared manually by the secondary students under SUPW are useful to primary students (community). But the teachers should not forget that they are the key persons in the entire preparation process of these kits.

Statement of Project

The statement of the project is as under :
Role of secondary students in preparation of self-learning kits for primary students by using waste materials under SUPW.

Purpose of Project

The purposes of the project are as below:

- To prepare self-learning kits by secondary students using waste materials under SUPW.
 - To motivate teachers in preparing self-learning kits for primary students.
 - To make aware teachers and secondary students of the importance of waste materials.
 - To develop productive and manipulative skills among secondary students.
 - To acquaint secondary students with their local surroundings.
- The article is suitable to realize its objectives of teaching.
 - The article is helpful for primary students in self-learning.
 - The article has sanction and approval from primary school teachers.
 - Institutional time allocation for preparation of the article is adequate to complete it.

So in view of the said considerations, some of the articles which can be prepared by secondary students using waste materials for primary students under SUPW are as follows :

Chess Boards

Chess boards are made of cardboards of different sizes with different number of columns and rows, eg. 4×4 , 6×6 , 8×8 , etc. They contain different figures and letters to be used for counting, adding, subtracting, multiplying, finding missing figures, etc.

Selection of Articles under Project

Any project, no matter how wisely it is conceived, may fail to yield the anticipated results or may end in a fiasco if its implementation aspects are not given due consideration. One of the major points concerning implementation of preparing self-learning kits is the selection of articles. If selected articles are unable to fulfil their objectives, teachers can land in troubles instead of expected results. It is, therefore, essential that selection of articles is done with utmost care and caution taking into the following considerations :

- Competent teachers are available to get articles prepared.
- The article is based on local waste materials

Snakes and Ladders Board

Snakes and ladders board is also made of cardboard. It is to be used to provide incidental number-practice. Students get familiar with numbers in no time by playing such game.

Dice

Dice are made of wooden cubes having fraction numbers, decimals and whole numbers. They are to be used for teaching arithmetical fundamentals of addition, subtraction, etc.

Mathematical Figures

Mathematical figures such as—triangles, squares, rectangles, polygons, etc. are made of wood, cardboard, plastic, etc. They are to be used to impart knowledge about them.

Trains

Trains are made of matchstick boxes with painted numbers in ascending order or in tables of multiplication. These numbers are to be copied down on slates for practising numeracy.

Mathematical Instruments Box

Mathematical instruments box along with its apparatus (scale, set square, compass, etc) is made of cardboard and tin. It is to be used in drawing figures, etc and in mathematics.

Clock Face

Clock face is made of cardboard with two arms of different sizes. It is to be taught hours, minutes, days, addition, subtraction, etc.

View Master

View master is made of wooden case with glass window. It contains rolls of papers having pictures. It is to be used to explain a concept or theme, eg. good habits, rich food, etc. It is also called 'Roll Theatre.'

Kaleidoscope

Kaleidoscope is a tube made of wooden or cardboard containing mirrors and small loose pieces of broken glass bangles. When the tube is turned constantly changing coloured patterns are seen through the eye-piece. These pattern are to be used in drawing.

Scroll Frame

Scroll frame is a wooden frame containing two rollers on which strips of cloth or paper can be fixed and rolled. On the strips some series of pictures can be affixed. Some programmed materials for reading exercise, evaluation, story, etc. can be presented in a panoramic manner.

Cut Outs

If the pictures are very clear, cut them from newspapers and periodicals and paste them on different cardboards. They are to be taught vocabularies, compositions, dramatization, etc.

Models

Models are made of wax, plaster of paris and waste cloths, etc. They are to be used to give an illusion of reality because they are the true replica of real objects except their size. For example, a teacher cannot bring an elephant into the classroom. In such a case, by showing the model of an elephant, his purpose can be served. Models can also be used for teaching written composition.

Cards

Cards are used to create proper language sense. This is none the less for the beginners. New learners of the language can be taught with the help of cards. They can be developed of various kinds, eg. letter cards, sentence cards, look and say cards, matching cards, figure cards, flash cards, etc.

Matchstick Figures

Matchstick figures are made on card sheets, cardboards and wood. Instead of giving minor details for an object, only outlines of it in the form of curves, circles and straight lines are drawn. Such figure conveys the form of the object.

Masks

Masks are made of painted cardsheets by cutting in different shapes of animals, birds, heroes, etc. They are to be used in mono-acting, one-act play, dialogue teaching and developing imagination among the students.

Usefulness of Project

The following are the uses of the project :

- (a) Kits may be used as self-learning materials both at school and at home by primary students for acquiring knowledge.
- (b) Secondary students may become the producers of self-learning kits. They may also develop new kits in future.
- (c) Self-learning kits may be used as educative play materials at pre-school education centres.
- (d) Positive attitude towards preparing self-learning kits may be developed among teachers
- (e) The project aids in diminishing the problem of wastage and stagnation by providing self-learning kits to primary students to play and to learn at their own level. So in this way, it improves the educational standards.
- (f) Multi-media programme is more effective than single medium programme in teaching-learning process. So the self-learning kits may help the primary school teachers in providing

better education to primary students in economised way.

- (g) The project enables primary school teachers to remove inequality of opportunities of learning between the rich and the poor by giving self-learning kits to all students.
- (h) The project helps secondary students in achieving one of the main aims—meaningful manual work resulting in goods of SUPW.
- (i) The project brings pre-vocational awareness among secondary students.

Conclusion

Secondary school teachers can get some self-learning kits prepared by secondary students using waste materials for primary students under SUPW. Most of the primary school teachers also accept them for their regular teaching. Although it is very wide area, yet suggested work here is only for giving an introduction to inspire the teachers that a lot of local waste materials for learners is available to a great extent in their surroundings to use them. So they should come forward and take initiative in this direction.

mathematics, language teaching and science as a palatable way of providing practice and consolidation of material already presented by other means. The games are an effective and efficient method of reinforcing student learning in science, language teaching and mathematics. The laws of physics, grammar and mathematics are all good examples of finite systems for which it is particularly easy to design games with rules which embody those laws.

Most simulations and simulation games are intended to produce rather different kinds of learning. Teachers are something as concerned with the process of learning as with its end product. Thus simulation/games can be very effective instruments of personal and inter-personal learning.

Simulation/games has a very grave problem, that is it takes long hours to complete. The over-crowded syllabus and examination schedule do not permit these simulation/games to continue in practical classroom situations. Many simulation/games generate a good deal of noise and then complexity, this is often unpopular in schools and colleges run on traditional lines. The most important part is the demand it makes on the teachers. Confidence is perhaps as important as skill in the running of such exercises in the classroom.

Simulation/games are becoming popular because they are useful when objectives

include changing students' attitudes - a task on which traditional lessons and lectures have proved rather ineffective. It might seem the role-playing exercises would be especially valuable. Like any other teaching technique, simulation/games need to be integrated into the curriculum as a whole. Without appropriate follow-up activities like—films or field trips, a large-scale simulation is in danger of becoming a mere diversion from the mainstream of education.

Evaluation

Evaluation of simulation/games is especially problematic. A traditional input/output model concerning itself with immediate and measurable end products is peculiarly inappropriate to assessing the effects and value of open-ended simulation/games.

Conclusion

Simulation/games is a new invention of this nuclear age. Apart from its advantages and disadvantages it will provide a new dimension to the educational field, if it is applied in the actual classroom situations.

Teachers in day to day teaching can apply simulation/ games in areas of science, mathematics, language and grammar and make the subject very interesting and palatable for his students. Likewise, the relationship between teacher and taught will improve and education would enhance good results.

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The Primary Teacher is a quarterly brought out by the National Council of Educational Research and Training (NCERT), New Delhi. The Journal intends to give to the practising teachers and concerned administrators, authentic information about the educational policies being decided on and pursued at the Central level. It aims at giving meaningful and relevant material for direct use in the classroom. It would carry announcements of programmes, courses of study, etc., offered at various centres in India from time to time. It also provides a forum for the discussion of contemporary issues in the field of education.

The major features of The Primary Teacher are

1. Educational policies concerning primary education
2. questions and answers
3. States round-up
4. Illustrated material for classroom use

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could be properly honoured and awarded. A renowned educationist T. P. Nunn says, "Nothing good enters into the human world except in and through the free individuality in man and woman." It means proper environment should be provided to every man so that he may develop individual ability or capacity to control his environment which surrounds him for his own betterment. But, there is a highest possibility for that individual to be autocrat, dictator and tyrant. This nature will produce personality like Hitler, Mussolini and alike persons. It means that Iqbal's conviction about man's nature tells us half truth. And half left truth about human nature is supplemented by the saying of Sufi which says :

*Nukte Ke Her Pher Se Khuda Juda Hua
Nikal De Khudi Ko Tuhi Khuda Hua*

The change of place of a dot, the word "Khuda" (God) becomes 'Juda' (separated),

Merge your ego into collectivity, you will become the God (Khuda).

If a man achieves individuality he should transcend it to the whole humanity irrespective of caste, creed, colour, language, culture and even nationality. Then he becomes altruist and his self merge into selves of all which is God. This is why it is said that self of an individual is soul and selves of all is God (*Apni Atma, Atma Hai; Sabki Atma Paramatma Hai*). This type of collective self is altruistic in nature which is peaceful also. And this is aim of real education. Both individuality and collectivity are essential for the good of self and society. Iqbal and Sufi conceptions about man's nature are true. If a person has no two breads how can he extend one bread to the needy ones. It means man must be capable of livelihood for betterment of self. But man is not made up for self only. Hence, what he has become capable for himself he should extend his services for the benefit of others also. This is true of altruistic nature of man which is a condition for perpetual peace.

State Determines Man's Nature

Man is the product of political environment. State is most powerful institution in every nation of the world. The behaviour of man varies with variation of the political systems. Man as an individual is in the clutch of the particular form of government which may be a democratic or non-democratic. In today's world, out of 160 States, about 140 States are dictatorships of one kind or another under which man is incapable to develop his individual and altruistic nature. This type of States make their citizens slaves and the slaves fail to develop their own nature of egoism and altruism. One or a dozen persons in non-democratic States hold the decision-making power that enables them to declare which persons or groups of nations should die. Even in the 20 countries that can be called democratic or quasi-democratic, a very small number of individuals (the economic and political elites) who control the presidency or the cabinet, the communication media and the political parties are really making most of the crucial decisions most of the times. These powerful individuals have the right to decide that millions of people should be sacrificed for what they perceive to be betterment of the rest. A world renowned sociologist Pitirim A. Sorokin thinks, "if the State machinery functions for the benefit of a selfish minority and its rulers are incompetent, rapacious or corrupt, the State is bad and functions poorly." Erich Fromm also observes, "if a person fails to attain freedom, spontaneity, a genuine expression of self, he may be considered to have severe defect, provided we assume that freedom and spontaneity are the objective goals to be attained by the majority of a given society, we deal with the socially patterned defect." Thus, if most people fail to attain proper and equal opportunities for their full development we may consider it a State-created defect.

The State must have the bases of universal human nature and energies. Every man comes

into this world with egoistic and altruistic nature to be developed for self-perfection. If the State is one of the effective means for achieving it, then it must reconcile the discharge of this duty for the sake of the individual and for its own sake. And this can be done only when State adopts true democratic form of government. Then citizens will be wiser, more competent and altruistic.

Perpetual Peace

There will be no peace without altruism. Altruism is a condition for lasting peace. The highest altruism and highest creativity are inseparable. There are many types of altruistic persons and many ways to become altruistic. All normal human beings getting their living through honest work have a chance to practise the highest type of altruism and many of them in the most diverse calling, do so. Scientists who are engaged in work that benefits others, giving to it all their energies regardless of remuneration and sacrificing for it their health and other utilitarian values, are also the great altruists. Poets, dramatists, artists, composers who perform the same functions in their respective fields of creativeness are example of altruists.

Eminent philosophers, moralists, inventors and peace educators who are similarly motivated also come under this category of altruists. They all function as great altruists in respect to that portion of their work which they freely perform for the greater welfare of humanity and which actually benefits a large number of human beings. And such people perpetuate altruism through their acts and behaviour which naturally become foundation for permanent peace.

Education : Means for Altruism

Hitopadesha defines education.

Idya Dadati Vinayam, Vinayam Dadati Paratvam, Patratvam Dhanam Apanoti, Dhana

Dharmam Tatah Sukham.

Education gives rise to self-discipline, self-discipline brings abilities, with abilities comes wealth (prosperity), wealth promotes social service and social service brings happiness and peace.

It means that real education makes man self-disciplined and through self-discipline abilities are developed which bring wealth or prosperity. Prosperity earned only through self-discipline and abilities motivate, impel and encourage for social service or altruism which gives happiness and peace.

The foundation of peace is universal prosperity but prosperity earned only through ability and self-discipline can be the basis for altruism. "Poverty any where constitutes a danger to prosperity every where." If there is a danger to prosperity, it means it is danger to peace. Hence, all men should be free from poverty and hunger by developing ability to achieve prosperity. It is also true, "one man's freedom from hunger and want is neither a true, nor a secure freedom until all men are free from hunger and want." Therefore, everybody should get proper opportunity to develop his ability to obtain wealth or become prosperous. This prosperity makes man altruist. Saint Kabir thus requires from the Almighty :

Sai Itna Diye, Jame Kutumb Samay, Mai Bhi Bhukha Na Rahun, Sadhu Na Bhukha Jay

O' God, give me as much food so my family can be well-fed. Besides, I may not be deprived of food nor any needy may move hungry from my door.

Swami Vivekanand rightly understands education as undoubtedly one of the most effective and far-reaching preventive measures. A healthy man-making education, and distributed among all classes of people according to various needs and capacity, can go a long way towards

ensuring them against poverty, disease, premature mortality, against the tyranny of landlords, caste lords, money lenders as well as against sectarian and communal troubles of all sorts. Man-making education never deprives the people in any way. It makes man altruist which is a condition for enduring peace in a nuclear age. Thus, no man can rest peacefully until decent-living standards have been established for all mankind

everywhere. In the words of a great Indian poet, Shri Jaishankar Prasad :

Auro Ko Hanste Dekho Manu, Hanso Aur Sukh Pao. Apne Sukh Ko Vistrit Karlo, Sabko Sukh Banao.

O' man, see laughing others, Laugh and be happy,
To expand your happiness, Make others happy.

“Vocational Education : Elixir for Masses”

KIRAN SONI

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Education and Law
Thiruvananthapuram*

Our country is in the grip of serious crisis and on the verge of breakdown with mounting unemployment and violence becoming a way of life. Our education system has its own share in this crisis. Mounting unemployment coupled with persistent under-employment is cutting across all our policies, plans and efforts. The country-wide frustration of the educated classes has found form in a crisis in our educational system. One of the first and the most stupendous tasks facing us today is the meaningful reconstruction and expansion of the educational system.

It is common knowledge that secondary education is perhaps the weakest link in the Indian education chain. It has neither a specific character nor does it mark the end of formal education. It is only a stepping stone to higher education drawing one and all in the fold of universities. It is not complete in itself. There is a lack of clear perspective and co-ordination of thinking. The higher secondary schools ought to be more comprehensive and multi-purpose covering a variety of courses with an occupational bias. To rectify the defects in the present educational structure, vocational education has been given much emphasis with every review of the educational system. Every Committee set up to evaluate the educational system has time and again reiterated the need to establish effective linkages between the world of school and the world of work. The aim of transforming education to empower people for work is not to be construed as merely creating marketable skills. There is a need to inculcate

respect for socially useful work and productive labour in the entire process of education. This is the only way in which people can be empowered to work. This will facilitate the development of not merely a more relevant knowledge base, but also creative intuition on which one can keep building throughout one's life. The crucial role of education is to equip the students with the capacity for creative work. There are strong indications to strengthen the vocational education in coming few years and to correlate education and work. The decision of Government of India in May 1990 to review the National Policy on Education 1986 by a High-Powered Committee under the Chairmanship of Acharya Ramamurthi reminds us once again of the gaps in the present educational policy and system.

Meaning

Vocational education is the instruction intended to equip person for industrial and com-

mercantile occupations. It can be obtained either formally in trade schools, technical secondary schools or any on-the-job training programmes or more informally, by picking up the necessary skills on the job without actual supervision.

History

Vocational education in school is relatively a modern development. Until the 19th century, such education except for the professionals was provided only by apprenticeship. The situation was partly due to low social status associated with such instruction as opposed to classical curriculum considered necessary for a "gentleman".

With the growth of industry during the 19th century, several European countries, notably Germany, introduced vocational education in elementary and secondary schools. In Great Britain, however, opposition to vocational education persisted into 20th century although a few trade and junior technical schools were established by local authorities before World War I. By the late 19th century, public and "common" school education in the United States consisted of manual training and practical arts. These programmes were gradually expanded until 1917, when federal aid was provided to public schools for trade, industry, agriculture and home-making courses.

After World War II, the demand for trained para-professionals in the relatively new fields of computer science, electronics and medical services led to an increased interest in short-term post-secondary specialised training programme in these areas as an alternative to the traditional college education. In India, the roots of vocational education can be traced to the Gandhian philosophy of basic education which propounded the principle that education should be work-centred. This emphasis was reiterated by the University Education Commission in 1949 chaired by

Dr. S. Radhakrishnan, followed by All India Secondary Education Commission under the Chairmanship of Dr. A. L. Mudaliar in 1953 and by Kothari Commission which advocated work experience. The need to establish operational linkages between the world of school and the world of work was reckoned in the National Policy on Education 1968. Subsequently, vocationalisation of education was propagated by the Central Advisory Board of Education Committee on Education Structure in 1972. It also found a significant place in the review of education system done by the Janata Party in 1977 and Dr. Eashwar Bhai Patel Committee which suggested Socially Useful Productive Work (SUPW) and State Education Ministers Conference in the year 1981. The repeated announcements of Government of India and the propaganda carried out by the protagonists of the scheme seem to have strengthened the idea of vocational education.

Though the State of Kerala proudly claims to march ahead in the field of literacy yet she is second to none in the field of unemployment. Reckoning the need to link education with employment and productivity, vocational education at +2 level was introduced in Kerala only in the year 1983-84. At a first stage, the scheme was implemented in 11 Government High Schools and 8 Technical High Schools which expanded to 52 more new schools in 1984-85 and 2 schools in 1986-87.

The new National Policy on Education (1986) envisages that 10% of students at +2 level have to be diverted to the vocational stream of education by the end of VII Five-Year Plan and 25% of students at +2 level should have facilities for vocational stream of education at the end of VIII Five-Year Plan with the substantial financial assistance from the Central Government. The Government of India approved the scheme of vocationalisation of Higher Secondary

Education in Kerala as a Centrally-sponsored scheme during 1988-89. Likewise, 27 new schools were brought into the vocational field. At present Kerala has 100 vocational higher secondary institutions conducting 200 vocational higher secondary courses. The plan of action for the VIII Five-Year Plan proposes to increase the number of vocational higher secondary institutions to 250 with four courses and intake of 100 students in each institution. Thereby by the end of the VIII Five-Year Plan, 25,000 students will be diverted to vocational stream of higher secondary education.

Objectives and Pre-requisites

Education is accepted as a powerful instrument for economic prosperity and upward mobility in society which necessitates establishing a bond between education and productivity. The objective of vocational education is to prepare the student for some vocational life and enable him to enter the world of work as an enlightened and efficient person. The apprentice is only a learner. In order to live up to the demands of the future job, he must achieve as much knowledge as possible and acquire certain skills. For this reason, after completing 10 years of general education, he sets about acquiring new practical and specialised knowledge. He gains practical knowledge of technical processes, regulating manual operations and also certain knocks and tricks of the trade and industry that need to be mastered. And last but not the least, he develops a civic attitude which benefits a member of the working class.

All these require the effectiveness and willingness to give one's best. It demands readiness to take pains for two or three years time. Vocational training, like all education facilitates the all-round harmonious development of human personality. It is intended to help everyone to develop his

talents and capacities for the benefit of the society as well as for his own self.

Any one who pursues such aim in setting up a system of vocational training clearly has no intention of turning out people who want to play it safe and just to do as they are told. Therefore, to say that apprentice not being his own master, is wrong. A skilled worker is distinguished by class consciousness, expertise, creativity, cultural interests and the desire to improve himself.

Even during the period of their apprenticeship, girls and boys acquire such traits. This, in fact, is a development on which the most enduring influence is exerted in the production process. The work collectives in which apprentices work should not only instruct the latter in their practical activity, but also draw young workers into their entire range of activities.

The training of future skilled workers to a high standard should be closely bound with social requirements and scientific and technological progress. Higher productivity and improved quality of work pre-supposes a better standard of training, for a high level of knowledge and skill enables a worker now-a-days to be creative in his work, to organise the work process rationally or make suggestions concerning the improvements of machines and equipment. At the same time, this requires a proper political and ideological attitude on one's part. More skilled workers should be equipped with socially professional knowledge and be capable of creatively exercising their trade and acting on their own. The school children and apprentice of today will be the skilled worker for the year 2000. Thus, the large sums that are spent on education are investments for the future.

In our country, education is still a privilege. The paths of each one diverges depending on the

stage of the drop-out and individual circumstances. However, most school leavers should learn a vocation which at the same time should open the door to technical college from which they can go on to the institutions of higher education. Others can proceed from 10 years of schooling to two years of supplementary schooling after which they too are qualified to embark on a course of higher education. If anyone's studies fail to proceed smoothly, his fate should not be sealed. He should be given an opportunity for making up for the lost time in vocational training institutes or adult education classes. He too can attain the level of education of which he is capable. The partially skilled jobs like domestic helper, dry cleaner, gardener, seamstress, store clerk, assistant cook, printing worker and skilled jobs like fitter, grinder, electrician, building painter, mechanic, post office worker, etc. can be the choice of possibilities, ensuring everyone the chance of a career even when the individual circumstances are unfavourable.

Vocational training can be effectively used for the placement of the handicapped too. The physically handicapped children should be registered with the public bodies so that they can receive the kind of care they need and be prepared for a suitable career.

Can anyone become what he wants to be? In principle, yes. In practice however, if it happens that school boys and girls want to take up a career only because it appears attractive at a given moment because it is as it were "fashionable" or often it happens that there are far more applications for a given training course than there will be jobs later. Finally, many a young person without any idea of what his future job would involve sets his heart on a vocation that does not correspond to his aptitude. The bond of departure in organising the system of vocational training is planning which is the essential feature of the economy as a whole.

The planned and proportional development of the national and state economy requires many other things, an exact calculation of the demand of skilled workers of various specialisations and for technologists and engineers of the most varied kinds. There is also enhanced need for career guidance centres to provide information on various careers available and their importance to the community and to draw attention to the existing needs within the framework of the nation's economic development. Thus, whoever decides on a career keeping all these needs in mind will find a vocation best suited to him and can become what he wants to be. Strictly speaking, career guidance should begin on the first day of the school. There is also a need to introduce polytechnical instruction (regular visits to factory) as it helps in the preparation for a career by giving the pupils an opportunity to become acquainted with individual specialisation. They can then know what a given job requires and this will certainly facilitate the choice of career.

Theory and General Education

The theoretical and practical aspects of vocational training are inseparably bound up with each other. There is no contradiction between the two, though it is a well known fact that with the rapid development of science in recent times, the impact on theory of vocational training has increased considerably. Today, theoretical subjects account for greater part of the teaching time. For many young people, this is not easy to accept. They have already spent 10 years in the classroom and perhaps have a longing for a moment when they will be able to show what they can do in practice. But for a skilled worker who wants to master new techniques, who would like even to try something new for himself and develop it, needs a social theoretical grounding. The ultimate aim of theoretical knowledge is to impart knowledge which can readily be applied.

Suggestions

To strengthen the vocational education, it is suggested that core curriculum should include important vocational component and fragmentation of secondary education into academic and vocational streams should be avoided. Secondly, schools should offer vocational courses in varying combinations with academic subject. Thirdly, provision should be made for further education in vocational subjects for students taking up vocational courses at secondary stage, leading to direct job placement or self-employment. Fourthly, vocational courses should be encouraged to make them relevant to the number of vocations in both organised and unorganised sectors particularly in rural sector. The design of vocational courses should be such as to promote transferable skills in order to optimise the vertical and horizontal

mobility and to cope up with the demands of changing technologies. Finally, vocational training and direct experience to students within the production units i.e., working situations should be encouraged to strengthen the operational linkages. Course development and training in skills should be matched with the requirement of user agencies who can be significantly involved in the design of courses and training modules.

Secondary education if it is to serve its real purpose must cater to wide variety of choice. However, craft should not become the centre of education. The wheel of education must necessarily rotate on the axis—child. Only then we can rightly assert that education for the people is a desideratum anywhere at any time.

Teaching History through Audio-visual Aids

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In order to make the subject matter of history vivid, interesting and clear to the students, teaching aids are often used in schools. Infact, aids supplement the work of the teacher and help in the study of textbooks. They help to present the unit of knowledge through auditory or visual stimuli or both with a view to help learning. In other words, it concretises the knowledge to be present and thus helps in making learning experience appear as real and living.

In history teaching, effective use of audio-visual aids can vitalize teaching at junior and senior high schools. When used properly, audio-visual materials can inject impressions that heighten students interest, aid their comprehension and facilitate their development of appreciation. Relatively few authors of printed material in history achieve the degree of colour and realism found in the best audio-visual materials. Thus, remoteness of times and places, with which most subject matter in the social studies particularly history deals, does not constitute an insurmountable barrier even for slow learners. Through appropriate audio-visual materials, the students can 'hear it now' and 'see it here'.

According to an old Chinese proverb, "one seeing is worth a hundred telling". Whether this be literally correct or not, it embodies a sound truth which has come to be recognized in education. Sight is probably the most important of the various senses by which man gains experiences. The other in the approximate order of their utility,

are hearing, touch, taste and smell. Audio-visual aids supply new experiences and new imagery. While oral description call forth whatever relevant concepts the students have already acquired through previous experience—a picture, a model or a specimen actually extends the limit of experience. The ability to analyse, compare, generalize and synthesize must rest upon the broad base of experience. If the student has had insufficient experience, it is idle to call upon him to deal with abstractions involving such experiences. The basic question which should precede the use of audio-visual aid is : has the student had the necessary experience ? If the answer is in the negative the teacher will in most instances do well to try some type of audio-visual aid.

The students who are necessarily limited as to experience are the young and the less intelligent. It therefore follows that, holding intelligence constant, the value of audio-visual aid varies inversely with age. It also follows that their value usually varies inversely with intelligence

This analysis furnishes a general principle of guidance in the use of audio-visual aids.

Audio-visual aids properly used cannot justly be regarded as supplementary learning, they are fundamental. They furnish experience, they facilitate the association of objects and words, they save the student's time, they provide simple and authentic information; they enrich and extend one's appreciation, they furnish pleasant entertainment, they provide a simplified view of complicated data, they stimulate imagination and they develop the students power of observation. Audio-visual aids may need explanations, but they do not need translators, they speak a universal language of form, colour, position and motion. They constitute one of the royal roads to learning.

Audio-visual aids do not constitute a method, they merely supplement other methods. Consequently, they should be used after a careful consideration of the scope of the content that is to be studied.

Important audio-visual aids generally used in history teaching are motion pictures and television.

Motion Pictures : Teaching may be done much more effectively by pictures than by words alone. A single picture is effective but pictures presented in sequence have an accumulative effectiveness. When pictures are shown in sequence at the rate of twelve each second, they give the impression of motion or animation in the object portrayed.

Motion pictures add a very important element to audio-visual instruction particularly after the first world-war in European schools. In Indian schools, particularly public schools, the use of this aid is gradually increasing. It has many advantages. For example it :

- provides motivation
- extends the range of experience
- aids the poor reader and slow learners especially
- is highly valuable for introducing new materials
- can clarify processes and procedures
- increases the amount learned within a specified time
- strengthen retention
- clarifies perceptions, concepts and understandings
- encourages further reading and study
- produces more and better group discussion
- reinforces other methods of learning
- creates a feeling of reality about unknown persons or places
- encourages desirable attitude and behaviour patterns

Care should be taken by the teacher to view the film and decide upon its fitness before presenting it to the class.

Television . As a teaching aid, television shares most of the advantages inherent in motion pictures. History literally takes place before the eye of the student. He is not seeing re-enactment or a depiction of the previous event, he is seeing the event here and now.

The history teacher should try and become familiar with the programmes that their pupil watch, especially those programmes whose content may pertain to history or to one of the social sciences if for no other reason than to understand where the pupils may be getting some of their misinformations.

Television programmes can be good source of enrichment of activities. Among the best are—

travelogues, news specials, news commentaries, news programme, interviews and so on. Also, programmes can motivate students and make learning permanent.

In history teaching, five kinds of instructional situations commonly call for the use of audio-visual aids, assuming that appropriate specific ones are available. These five types of situations involve the elements of reality—motivation, efficiency, sense of time and general impression.

Gaps between the seeming remoteness of what the students are studying and the reality of the world as they know it can often be bridged effectively by audio-visual materials. Pictures and sounds can bring students many degrees nearer to reality of remote peoples, places and events seeing and hearing "the real things" or a vivid representation of it, often can make the subject matter of history more understandable to adolescents. While the audio-visual representation is not precisely the same as the reality, that medium can often meet the widely recognized need for greater realism in history. It can frequently aid in introducing or summarising a topic of study.

Many teachers are aware of its motivational value. Most adolescents look forward more eagerly to seeing motion pictures than to reading textbooks. For they help in stimulating interest. Generally, they are employed at the beginning of or otherwise, early in the study of a topic.

Employment of audio-visuals can facilitate economic use of time for learning. A ten-minute film on a topic may 'get-across' more ideas than a lecture three times that long. Thus, need for the most efficient practicable use of time in history

frequently may be met through careful selection and usage of audio-visuals.

Similarly, those audio-visuals materials that involve the reproduction of motion have a potential and often effectual value for history. Basic and important element of history concerns processes, movements and other phenomena occurring during a period of time. When the passage of time is of distinctive consequence in the phenomena, moving audio-visual may help to convey a sense of time in motion. Thus, a motion picture may establish in the mind of the learner, more surely than would words alone the passage of time during a historical trend or that intervening between events.

Also, sometime history teacher uses the condensed version of human relationships that are capsuled into some audio-visual materials for the purpose of treating briefly topics that are not to be studied extensively by students. However, care should be taken in selection of these topics.

Thus, along with other teaching aids audio-visual materials should be widely used in history teaching for they help to reveal the past, illuminate the present, give meaning to the content and clarify experiences. The use of such tools of instruction is ever expanding with television, the most recent vehicle to invade the learning laboratory. These techniques of communication are particularly helpful to the skillful teacher in directing effective learning for pupils. The wonders and events of the world in a contemporary age are viewed as well as heard, as they occur. The history and contemporary affairs classes are made both interesting and realistic with well selected audio-visual aids. The content of the textbook and the information supplied by supplementary materials become more meaningful with the use of such aids.

Encouraging Creativity in Children

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Early young years are impressionable years. Young children are in a stage of constant discovery and invention. They are curious. They express themselves in many divergent ways. A creative young child is constantly exploring and expressing. Creativity is a state of mind which can be expressed through a wide variety of responses. Creativity in young children comes out in many diverse ways. These divergent responses are very much needed for education and play an important role in problem solving, convergent and divergent thinking in later years.

One of the major objectives of providing early childhood education to these young children is to encourage in the child independence and creativity by providing him with sufficient opportunities for self-expression. Many of the creative attitudes and abilities are formed in childhood, so it should be the endeavour of early childhood teacher and educator to foster creativity in the young child.

The development and growth of the pre-school child in an atmosphere of creative freedom is where the teachers and adults have to provide the favourable climate. Creative pre-school prepare lively and interested students for the next step, the primary school where they should find further stimulating environment to enhance creativity and imagination. Now-a-days, one can find a large number of pre-schools coming up and setting up for providing early childhood education in urban as well as rural areas. Also total days

programme is being provided in a small classroom with school having no facilities for out-door play and free exploration and expression. Majority of the activities are seen to be teacher-initiated or teacher-centred. Taking into consideration all these factors, present study was taken up with the following objectives :

1. To find out the opinions of pre-school teacher regarding creativity in terms of :
 - Its meaning in general
 - Its meaning in particular with regard to young children.
2. To find out the types of creative activities provided to young children in these pre-schools.
3. To find out the various reasons for providing such creative activities.

4. To find out the materials, space and opportunities given to young children for creative expression and developing creativity.

Different pre-schools running in town areas of Rudrapur and Haldwani block of Nainital district were selected for conducting the study keeping into consideration the approach ability. On the permission of the principals, the questionnaires were handed over to the teachers. The questionnaire consisted of two parts including background of the respondents and questions relating to their opinions on various aspects of creative experiences. Questionnaires were distributed among thirty pre-schools. Total number of 24 schools finally participated in the study. Schools run by Government were 15 and 9 schools were run by private organizations. Out of these twenty four schools, majority of respondents that is 62.5 percent were in between the age range of 20 and 30 years. Very small percentage that is 4.17 percent were also between 50 and 60 years of age. Half of these teachers were nursery trained. 58.33 percent of the teachers were in income slab ranging between Rs. 600 and Rs. 900 per month. 16.67 percent were in the slab between Rs. 900 and Rs. 1200 per month. Regarding experience, majority of them that is 62.5 percent had teaching experience ranging from one year to five years.

Opinion was sought on meaning of creati-

ty. According to 20.83 percent of the teachers "creativity was making different things with hand by using imagination", "making something new" was creativity according to 16.6 percent whereas 12.5 percent and 8.33 percent explained that creativity was like "making something after observing and story telling with the help of pictures" respectively.

Regarding children's creativity 16.67 percent of the teachers were of the opinion that "creativity is the child's ability to do creative work within available resources and situation". Also "child who makes new things while playing with clay and other play material through use of his imagination is creative" was expressed by 16.67 percent of them. Very small percentage that is 4.17 expressed "children who come out with their talent" were creative.

Various types of activities were reported to be given to Nursery and K.G. class children for creative expressions. Painting and drawing was reported to be the most common activity given by 41.66 percent of teachers. Next was 'paper folding and pasting' reported by 37.5 percent of teachers. 'Building blocks' was also considered to be creative activity given by 29.16 percent. Other reported activities were craft work and use of materials, clay and plaster of paris and threading beads provided by 20.83 percent, 12.5 percent and 8.33 percent respectively.

TABLE 1

Sl. No.	Types of Creative Activities	Frequency N = 24	Percentage
1.	Building blocks	7	29.16
2.	Painting and drawing	10	41.66
3.	Paper folding and pasting	9	37.50
4.	Clay and plaster of paris	3	12.50
5.	Threading beads	2	8.33
6.	Chalk work	3	12.50
7.	Craft work	5	20.83

TABLE 2

Sl. No.	Material Used	Number	Percentage
1.	Blocks	6	25.00
2	Clay	7	22.50
3.	Toys	3	12.50
4.	Coloured papers	7	22.50
5.	Card board and black board	3	12.50
6	Drawing books	1	4.16
7	Threads and beads	3	12.50
8	Leaves and flowers	2	8.33
9.	Water colours and coloured pencil	4	16.66

In terms of objectives for providing these experiences to young children, some of these objectives were "to know the habits and mental status of children" stated by 58.33 percent of teachers, "to create interest in learning" by 37.5 percent of teachers and 25 percent of teachers stated "to increase vocabulary and language as one of the objectives. Also "providing opportu-

nity of self-expression" was given by 33.33 percent teachers and 22.5 percent also stated "to help in motor development" as one of the objectives. Several other objectives expressed were "to encourage curiosity, to provide education, to make them independent", to give opportunity for sensory development and to improve their recognition power".

TABLE 3

Sl. No.	Types of Art Activity	Number	Percentage
1	Paper cutting, folding and tearing	16	66.66
2.	Making toys, threading of beads	2	8.33
3.	Clay work	7	29.16
4	Drawing and painting	9	37.5
5	Making doll house and sand play	1	4.16
6	Block building	3	12.50
7.	Crayon work	5	20.83
8	Coloured Alpans	4	16.66

Regarding use of drama and play techniques in nursery and KG classes, majority of respondent that is 75 percent stated that they provide such experiences. They provided simple short play based on moral values in the class, as reported by

16.66 percent of teachers. However, 12.5 percent, 8.33 percent and 4.16 percent of them reported drama and stories based on animal world, daily or family life, life histories of leaders and ancient cultures respectively.

TABLE 4

Sl No	Types of Drama	Number	Percentage
1.	Simple short drama based on moral values	4	16.66
2	Based on ancient culture	1	4.16
3	Based on life history of leaders	1	4.16
4	Based on animal world story	3	12.5
5	Based on educational and generous ideas	1	4.16
6	Based on daily life and family life	2	8.33
7	Play-way method	3	12.50
8	No response	9	37.50

"It helps in their learning process" was expressed by 79.16 percent of the teachers as one of the objectives for providing such experience. "To give them opportunity for expression of emotion and to help them learn moral values" were the other objectives cited by 33.33 percent of them. Various other objectives included development of cooperation, language, feeling of national integration, imagination, sense of entertainment, creativity and leadership ability in children.

On specific issue pertaining to importance of involving young children in these activities similar responses were reported, that is 25 percent stated "to develop sense of belongingness and to socialize with others", 22.50 percent teachers reported "to provide sense of joy and happiness" as objective. Also "to help them develop

language" and "to remove their feeling of shyness in a group" were other objectives expressed by 16.66 percent. Only 4.16 percent stated "to make them learn acting and role playing" as one of the objectives.

All of the teachers stated that they were organizing music and dance activities in the nursery and K.G. classes. Most common activities were action songs and folk dances as expressed by 58.33 percent and 41.66 percent of the teachers, respectively. Solo songs and poems were the next most commonly organized activities as expressed by 33.33. Also 20.83 percent of the teachers reported use of group songs in classes. Jumping, hopping and clapping were reported by 25 percent of the teachers. Use of musical activities was also reported.

TABLE 5

Sl. No.	Musical Activities	Number	Percentage
1	Action songs	14	58.33
2	Folk dances	10	41.66
3	Group songs	5	20.83
4.	Nursery rhymes	2	8.33
5.	Solo songs	8	33.33
6	Jumping, clapping & snapping, hopping	6	25.00
7	Poems	8	33.33

On response to the objectives of organizing such activities, 41.66 percent teachers expressed the objectives "to provide entertainment and joy". However, 22.5 percent of teachers expressed the objectives "mental and physical development" and "helping them to express themselves freely". "To help in language and sensory development" and "to aid in their learning" were other objec-

tives expressed by 20.83 percent of the teachers. Various other objectives were "to develop musical and aesthetic sense" as expressed by 16.66 percent of teachers, "to provide them opportunity for self expression" as expressed by 12.50 percent and "to help in their concentration and increase their interest" as expressed by 8.33 percent of the teachers.

TABLE 6

Sl. No.	Suggestions	No	Percentage
1	Let the child be free for satisfying his own creative urge. Teacher should guide only if the help is needed	3	12.9
2	Teacher should make creative and artistic environment of the classroom according to the age of the children	2	8.3
3	Gardening is also a good creative experience, it shall be given to the KG class children	1	4.1
4	Utilization of waste material or making different things with waste material should be taught to the children	3	12.9
5	Collection of leaves and flowers is a good creative activity for enhancing the knowledge of children regarding the plants and tree	2	8.3
6	Live things should be shown to the children and then they should be told to make pictures similarly	3	12.7
7	Children should be taken out for visiting natural sites i.e. zoo, museums, picnic, puppet shows etc	4	16.6

On reviewing the total responses, it can easily be stated that these pre-schools do provide some possibility for creative expressions though activities reported were mainly regular art class activities. Majority had their scheduled curriculum and also there was paucity of creative art materials, dance and drama materials in pre-schools and kindergarten. Therefore, provision can be made at school level for providing enough of such materials to classes of young children. Available local arts and folk tradition can be explored and materials be collected.

Further detailed study can be taken up to find out actual hours given in pre-schools and K.G classes for creative play activities and also observations can be made of days programmes in various schools. Their planning and scheduling of creative art, music and drama activities can be explored. Also teachers initiative and role can be investigated for further providing some training to the teachers of young children. This will certainly achieve desired objective of imparting and encouraging creativity in young children.

Behaviour Modification in Classroom Setting

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National Policy on Education (1986) has emphasized that child-centred and activity-based process of learning should be adopted at the elementary stage. By making elementary education child-centred, we would be introducing a long awaited reform in educational system. The most important aspect of this reform will be to make education a joyful, inventive and satisfying learning activity rather than a system of rote and cheerless authoritarian instruction. Behaviour modification techniques which evolved from the principles of learning particularly from classical and operant conditioning are powerful techniques geared towards individualizing classroom instruction and making it child-centred.

Behaviour models of learning and instruction have their origins in the classical conditioning experiments of Pavlov (1927), the work of Thorndike on reward learning (1913), and studies of Watson and his associates, who applied Pavlovian principles to the psychological disorders of human beings. The impetus for these recent applications comes primarily from the publication of two works. B.F. Skinner's *Science and Human Behaviour* in 1953 and Wolpe's *psycho therapy by Reciprocal Inhibition* in 1958. Skinner argues that human behaviour can be understood in terms of the principles of operant conditioning, and Wolpe stresses the role of classical conditioning in changing human behaviour. Wolpe's influence also stems from his descriptions of specific therapeutic procedures for dealing with human problems (for example, in systematic desensitization).

With the development of Skinner and Wolpe's works, educators began to employ behavioural techniques in school settings. For some types of learners these are standard procedures. Autistic and retarded youngsters who previously had made no progress in language development and social learning are now trainable, and in some situations, they are able to mix with so-called normal individuals. Milder forms of learning problems also have yielded to behaviour models.

There has been an impressive amount of research demonstrating the effectiveness of behavioral techniques with a wide range of problems, from snake phobias to social-skills deficits, behavioral problems and test anxiety. It also indicates that these procedures can be used effectively in group settings and by lay people. We believe that behaviour theory presently offers

many procedures that are extremely useful to school teachers.

Behaviour modification is a process in which some observable behaviour is changed by the systematic application of techniques that are based on learning theory such as operant and counter-conditioning. According to the principle of operant conditioning, once a behaviour has been manifested the probability that it will occur again can be strengthened or decreased by additional responses in the environment. Thus, if a small child sees a chair in the room (stimulus) points to it and utters the word chair (response behaviour) the child is responding to external forces. If after saying the word chair, the child's mother gives a kiss or toffee and repeats 'chair' that is alright (reinforcing stimuli), the child is likely to say this word again (response behaviour). This example illustrates the fact that behaviour is acquired through external variables that serve either as the original stimulus or as the reinforcing stimulus. Thus, behaviour can be accounted for in terms of the external variables. If the proceeding conditions (original stimulus) or reinforcing conditions can be changed then behaviour can also be changed.

The principle of counter-conditioning is slightly different in counter conditioning, a new behaviour that is compatible with the old behaviour is substituted, such as relaxation for anxiety. From behavioural point of view, learning means bringing behaviour under environment control. Learning to play the harmonium (the behaviour) is under the control of the printed music (the stimulus)

Behaviour modification differs radically from traditional psychodynamic thought because it concentrates on the behaviour itself, and not on some underlying cause inaccessible to modifica-

tion. Practitioners of behaviour techniques have devised several ways of observing and measuring behaviour which can be used by most teachers. They are of the opinion that maladaptive behaviours are learned behaviours and these can be changed by manipulating the stimulus conditions in the environment (operant principles) or by substituting the behavioural response (counter-conditioning).

The application of experimentally established psychological principles to the altering of responses is called behaviour modification. It is concerned with the variables that are currently maintaining the subject's behaviour and these behaviours can be altered. Probably, the greatest advantage of behaviour modification is that it does not require a one-to-one relationship between the behaviour modifier who establishes the procedure and the subject. The behaviour modifier can train teachers to carry out programme in classroom and parents to implement the programme in homes to deal effectively with children. They can also train individuals to alter their own behaviours. Many of the procedures can be utilized by a single behaviour modifier on large groups of peoples at one time.

Behavioral Problems

The behavioural problems of children generally lead to disturbance in the classroom climate and deterioration in overall academic routine of the school. Darwin Dorr, a noted behaviour modifier points to the evidence that some form of emotional behaviour maladjustment exists between 30% to 70% of the school children and these problems may continue to adulthood if not treated or corrected in the early years (Darwin, D : 1972).

The role of teachers is not merely to transmit a body of knowledge and skill prescribed in the

curriculum but also correct maladjustive behaviour and develop desirable values and attitudes. Information available in the area of behaviour modification is likely to be of great use to classroom teachers. Qualified behaviour modifiers are in very short supply. Hence, there is need for making classroom teachers aware of the theory and practices of behaviour modification techniques in the classroom settings.

New and inexperienced teachers in the beginning feel diffident as to how they can control their classroom and behaviour of the children assigned to them. It is quite likely that the methods and techniques they use in trying to manage these children may in fact turn out to be a case where they actually are encouraging undesirable classroom behaviour without knowing it or by accident. Through proper training and supervised practices in applying behavioural techniques, the teachers may gain or regain control over children.

In the teaching-learning situation the most important role is that of elementary school teachers. They have a key role in forming and shaping the behaviour of the children. Teachers and teacher-educators do no work as simulator and also they know little about simulations and responses. It is also widely believed that poor achievement, wastage and stagnation of elementary school children are due to the fact that teachers are quite unaware of the scientific techniques of behaviour management of the classroom situations.

These shortcomings can be overcome by orienting elementary school teachers in the principles and techniques of behaviour technology in general and behaviour modification techniques relating to classroom management in particular which will make teaching learning situation of the elementary level more effective and motivating.

Behaviour therapy or techniques of behaviour modification have proved to be successful in combating a wide variety of problem behaviours which the teachers may encounter with children in the school. These techniques might best be described as an approach to treatment that is based on learning theory or principles of conditioning and its primary objective is to decrease unacceptable or undesirable behaviour and to increase acceptable or desired behaviour.

Accelerating Desired Behaviours

Behaviour modification is a process in which some observable behaviour is changed by the systematic application of techniques that are based on learning theory and experimental research. It represents a collection of techniques that can be used by teachers directly in dealing with problem behaviours that are visible and concrete.

The term behaviour modification is used/referred to as contingency management. The relationship between the response and the reinforcement is called contingency and when contingency is controlled or managed, we have the process of behaviour modification.

Contingency Management

Contingency management, used as a basis for organising the learning environment or for altering the behaviour of individuals, consists generally of the same procedures (a) selection of target behaviour (b) measuring of target behaviour (establishing baseline) (c) formulating a contingency management programme (d) instituting the programme and (e) evaluating the programme.

Contingency management model is widely used with students who have major learning and behavioural problems. It is based on the operant

principle that behaviour is influenced by the consequences that follow. For an operant or contingent relationship to be established reinforcing consequences must follow. If the behaviour is not reinforced, it will become extinct. A reinforcer is a consequence that increases the probability of a particular response. Desirable responses can be strengthened through both positive and negative reinforcements. A reinforcement is positive if its addition to the environment such as a smile, a praise produces the adaptive responses. A reinforcement is negative if its removal from the situation following a response produces the desirable behaviour. Programmes based on behaviour theory emphasize positive reinforcement, specifically discouraging the use of negative or aversive stimuli except in rare instances.

We know that for a response to be established, it must be followed by a reinforcement. Depending on the purpose, some reinforcement schedules are more advantageous than others. Continuous reinforcement is the application of reinforcement after every emission of the desirable response. Although, it is often inconvenient, continuous reinforcement is the quickest way to establish a new behaviour and is very useful in the initial learning phases. More than likely, reinforcement is intermittent, that is, it occurs reliably in relationship to the desirable response either after a period of time (interval schedule) or after a certain number of desirable responses (ratio schedule). Both types of intermittent schedules can be fixed or variable.

The categories of reinforcement that are used to develop or extinct children's behaviour are :

- (a) Non-verbal reinforcers are like—hugging, kissing, smiling, showing expression of approval or disapproval etc.
- (b) Social reinforcers are like—good, correct,

fine etc. Not all social reinforcers are verbal praise. Facial expressions such as wink, nearness to an important persons who is sharing time and conversation and physical contact such as walking arm in arm or sitting on teacher's lap are all rewarding.

- (c) Material rewards can be consumable such as sweet, toys, picture books, toffee, ice-cream etc.
- (d) Activities reinforcers for children include going first, play time, recess, watching television, going around, etc.

According to behaviour theorists, the most effective reinforcement immediately follows a response. Delayed reinforcement is much less powerful in modifying behaviour. Reinforcement is at the heart of the behavioural model, for without it behaviour (response) cannot be brought under the control of particular environmental stimuli.

Contingency management has many uses including reducing undesirable behaviours. However, this model is also valuable in developing new behaviour such as academic skill, social-skill and self-management skill. Finally, contingency management is effective in strengthening and maintaining existing desirable behaviour.

Contingency Contracting

The use of contingency contracting as a behaviour modification technique is based on a principle developed by David Premack in 1959. Premack's principle is : "A behaviour that has a high rate of occurrence can be used to increase a behaviour with a low rate of occurrence." For example, the child is overactive and moving around. Teacher can ask the child to sit for a few minutes and then take him round. Here gradually the sitting behaviour gets reinforced, when it is

followed by going round. Teachers use this principle all the time when they give students free time after completing their work.

The advantage of contingency contracting is that it is positive: that is the child takes an active role in deciding type and amount of work required. Consequently personal responsibilities are understood by the child.

Token Economy

A token economy is a system of exchange in which tangible reward such as sweet, toys, gold stars, toffee stickers etc. are used for reinforcers in the classroom. In the study of behaviour modification they are earned only after a series of previous reinforcers have been received. Children earn tokens that are exchanged for specific reward. Many children are not able to function appropriately, if they must wait an extended time for reward. In addition, there are some children who have not developed to the level at which social rewards alone are satisfactory reinforcers. In these cases, the use of a token economy has proved to be an effective behaviour change intervention.

The tokens are usually valueless to the children when originally introduced to them. Their value becomes apparent as the children learn that token can be exchanged for a variety of rewards, such as being first in the lunch time, getting 10 minutes of free time, listening to phonograph records, watching television and so on. This versatility makes the token system superior to most interventions.

In this manner, tokens become potent reinforcers. They can be awarded over a period of time for acceptable academic and non-academic work. The system allows the teacher to structure

the learning environment for positive reinforcement and to provide immediate feedback to the children via tokens. Hence, a moderately well run token exchange can promote direct learning regardless of the content of the activity.

The token economy has worked very effectively in the classroom. Two reasons for its success are its lack of emphasis on competition with others and the fact that the reward menu provides sufficient variety to prevent boredom.

Tokens have typically been used on an individual basis. Studies regarding their use for the entire classroom are rare. Tokens can be presented for various appropriate behaviour and withheld for inappropriate and unacceptable behaviour. An important component of a token economy is the reward menu, which should be developed with the child or group.

Shaping

Shaping is the procedure of reinforcing successive approximations to some desired terminal behaviour. For example, if a child answers in a class but only at a whisper, a teacher can praise the child when he answers with just a little more volume than usual. Later, the teacher can reinforce answers that are more closely approximate to the desired terminal behaviour i.e. answering in a manner audible to both the teacher and to other students.

There are two distinct types of behaviour shaping interventions; progressive and chain. In the progressive shaping intervention, the child is required to engage in a series of steps, each of which is a continuation and progression of the previously learned step or steps. Examples of this intervention are bathing, hand washing, putting on sweater or socks and so on.

A chain intervention is composed of two or more separate and distinct steps or skills that are learned and combined sequentially to complete a specific task. For example, if the target behaviour were to teach a child to use a toilet, this complex task could be broken down into a number of simple steps, e.g. goes to toilet, pulls down clothes, uses toilet, uses water to clean, pulls up clothes, flushes toilet, washes hands, and dries hands.

Children often need special assistance during the steps of the behaviour shaping intervention. This special assistance may be manual or verbal and frequently called 'prompting'. Prompts may include such activities as guiding a child's head or foot in the completion of a task, moving the child's head to gain his attention, talking to the child through a task by repeated precise verbal instruction and providing a verbal model for imitation.

Although prompts of various kinds may be a necessary component of the behaviour shaping intervention initially, they must eventually be eliminated. The gradual elimination of prompts is called "fading". Fading includes the reduction of the amount and quality of manual guidance, verbal assistance and printed or three dimensional material used to structure an activity.

Modeling

In modeling, a child is exposed to one or more other individuals actually present (live) or filmed (symbolic), who demonstrate behaviours to be initiated by the child.

Modeling procedure serves three purposes.

- (a) It helps the child to learn new appropriate behaviour
- (b) It provides the child with opportunity to behave in a socially approved manner.

- (c) It decreases fear and anxiety in the child

The procedures associated with modeling rely heavily on other principles of behaviour theory such as reinforcement and successive approximation. It is in rare instances that totally new behaviours are acquired by modeling. For instance, in the treatment of total absence of language skill in some children, modeling technique would be very effectively used to acquire language facility. In this, model performs the desired behaviour (making a sound of 'oh') and guides the subject's performance, by shaping the mouth into a certain shape for the production of 'oh' sound. When the child approximates the modeled behaviour, he is given a reward and thus the desired behaviour is reinforced. However, in certain cases the children though capable of a particular behaviour, refrain from indulging in it due to (a) fear (b) anxiety (c) the behaviour being weakly established and (d) due to the punishing on sequences of the behaviour which had led to non performance. In such cases, the desired behaviour should be facilitated by modeling. For instance, when a child is not able to mix with other children and remains aloof, introduce a situation with a model child to a group of children. Reinforce the model child. Observation of this situation would facilitate the movement of the child who is withdrawn.

Undesirable Behaviours

There are three basic ways of decreasing the frequency of undesired behaviours: (a) extinction—arranging that no reinforcement is contingent on the undesired behaviour (b) punishment—arranging that an aversive event is contingent on the undesired behaviour and (c) time-out.

Extinction

The discontinuation or withholding of the reinforcer of a behaviour that has previously been

reinforcing it is called extinction. This technique is most frequently used to reduce crying or temper tantrum etc. Normally the parents show prolonged emotional behaviour. This serves as reinforcers to undesirable behaviours and it gets strengthened. To extinguish such behaviour children are left to emit undesirable behaviour such as crying or temper tantrum without reinforcing him that is by not lifting the child. The child is neither given his desired objects nor any attention paid to him following his undesirable activities. This strategy extinguishes the undesirable behaviour.

Punishment

It is an intervention used to decrease or eliminate an unacceptable behaviour. There are two distinct forms of punishment that the practitioner can consider for application with students. As commonly applied by parents and teachers, punishment is the addition of an aversive stimulus as a consequence of an unacceptable behaviour. Punishment of this form can be either physical or psychological. Examples are a spanking (physical punishment) or a scolding, extra work, after school detention or an undesirable additional task (psychological punishment).

The other form of punishment is the subtraction of something the child perceives as desirable. Examples are the taking away of television watching privileges, late bed time hours, freedom to leave the house or tokens or points.

The subtraction of previously earned tokens or points in the token economy intervention is called response cost. In this situation students are informed that not only can they earn points for privileges and goods but if they exhibit specific unacceptable behaviours, they can lose points. A specific number of points are subtracted from the total for each transgression. In other words, the

children are punished for exhibiting specific unacceptable behaviour.

Punishment by deprivation or response cost is generally considered less harmful to the child and a more effective intervention than the addition of physical or psychological aversive stimuli.

Punishment tends to suppress the undesirable behaviour rather than extinguish it. This suppression is of short duration and frequently the behaviour recurs in the absence of the punisher. It has been found that when a punished behaviour recurs, it usually does so at a rate higher than before the punishment was originally inflicted. In some cases punishment causes severe emotional problems. Punishment, especially harsh physical and psychological punishment should not be, as far as possible, used at all.

Time-out

Time out is the removal of a child from an apparently reinforcing setting to a presumably non-reinforcing setting for a specific and limited period of time. This is a technique employed to decrease maladaptive behaviour and one that is often associated with terms such as isolation and seclusion.

The effectiveness of time-out as an intervention is contingent on these factors: characteristics of the individual child, teacher's consistent application of the intervention, child's understanding of the rules of time out; characteristics of the time-out area, duration of time-out, evaluation of the effectiveness of the intervention.

The modifier must know the characteristics of the individual child before implementing a time-out intervention. For the acting-out,

aggressive, group-oriented child, time-out may be very effective. Such children want very much to be with the group and attended to by the teacher. Consequently, time-out area is not a rewarding place for these types of children. However, for a withdrawn, passive solitary child who is prone to day-dreaming, the time-out may be rewarding. These children may engage in their own little world while in the time-out area.

If time-out is to be applied as an intervention with a particular child, it must be utilized with consistency over a pre-determined period of time. Frequently, teachers are inconsistent in their application of time-out. As a result, the child becomes confused and the target behaviour is unwittingly reinforced.

Children should know specifically what behaviours are not acceptable in their classroom. In addition, they should know the consequences for exhibiting the forbidden behaviours. If time-out is to be used as an intervention, the rules for time-out should be communicated to the children. The rules will assist the teachers in trying to remain consistent and fair in the application of the intervention.

Care must be taken in the selection of time-out area. Teacher should avoid selecting an area that may appear non-reinforcing but is in effect reinforcing to a particular child. For instance placing a child in the corridor for time-out may be extremely reinforcing as the child has an opportunity to communicate with every one who passes. Another commonly used but ineffective area for time-out is the principal's office. In the office, the child has an opportunity to observe parents, and anxious administrators in their natural human state. In addition the child has opportunities to pick up the latest school news and gossip for dissemination among peers and teachers.

The area selected should be (a) away from high traffic (b) away from doors and windows (c) out of the other children's view and (d) within view of the observer/supervisor.

Time-out loses its effectiveness as an intervention if a child is left in the setting for too lengthy or too brief a period of time. Four to five minutes in time-out should be maximum except under extraordinary circumstance. A child should not remain in time-out for more than 10 minutes.

Counter-conditioning

Joseph Wolpe (1969) proposed the principle of counter-conditioning to substitute responses so that maladaptive ones are inhibited by adaptive ones.

Desensitization

Desensitization, the process of systematically lessening a specific, learned fear or phobic reaction in an individual became a popular therapeutic technique in the second half of the 1970's.

As indicated by Wolpe, the process of desensitization has been demonstrated to be effective when applied to individuals with fear and anxieties related to school attendance, participation in large group, water, animal, heights, flying, test taking and the like.

The process of systematic desensitization according to Wolpe, involves three steps.

- (a) Training the subject in deep muscle relaxation
- (b) Constructing an anxiety-evoking hierarchy of stimuli
- (c) Counterposing relaxation and the anxiety-evoking stimuli.

Very encouraging evidence of the effectiveness of desensitization in groups has been received. These studies included desensitization for spider and higher phobias as well as interpersonal anxiety and test situations. Obviously the possibility of conducting desensitization with groups of students makes the technique much more practical for teachers.

In order to apply desensitization in the classroom, the following conditions must exist :

- The teacher must have positive interpersonal relationship with the child. The phobic child must trust the teacher and be free to express fears in the teacher's presence
- The teacher must construct an anxiety evoking stimulus hierarchy
- The teacher must be willing and have adequate time to accompany the child in the progression from the least to the most anxiety-provoking stimulus in the hierarchy. Under normal classroom conditions the desensitization process is time consuming.

The following steps may be adopted for a child having school phobia (extreme fear of coming to a school) :

- Take the child to a certain distance towards school every day.
- Gradually increase the distance from day to day.
- Lastly take him nearer to the school
- Finally send him into the school and keep him there for some time.
- At every above stage, create a pleasant experience for the child by telling him story, giving him eating items or showing him picture books.

Thus this technique can be used to reduce mild phobias in children

From behavioural point of view, it is certainly desirable for teachers and parents to understand the problems their children manifest. However, the belief, that to understand a problem is to solve it, is usually erroneous. Psychodynamic theory provides a rich framework for analyzing and understanding maladaptive behaviour in children, but it rarely suggests practical, easy-to-implement methods of handling such behaviours either with an individual student or in the class as a whole. Exponents of behaviour modification suggest techniques which can be used by teachers directly in dealing with problem behaviours of children to produce changes in behaviour that are visible and concrete. The difference between the psychodynamic and behavioural approach lies in the fact that behaviourist emphasizes that the past cannot be changed and that one must instead concentrate on the present and the future. The behaviourist is more interested in changing behaviour than in explaining it. Their concentration is directed at how to effectively help children in their present situations rather than to seek explanations of how, where and when they went wrong. For this reason behaviour modification is, above all else, pragmatic and relevant to the educational settings.

A good deal of attempt has been made by behaviourists to apply behaviour modification techniques in controlling aberrant behaviours that interfere with teaching and otherwise socially unacceptable. The aim of these techniques is to help teachers to deal with those behaviour problems which are commonly encountered in the classroom and school settings. These techniques have been applied successfully to a vast range of different problems occurring in all types of school situations from nurseries to elementary schools. The knowledge of these techniques has to be applied with sensitivity and imagination that can only come through practice.

Subversion by 'Objective' Questions

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Of all the maladies that plague the academic bodies, examination is the one that matters most. Its malignancy threatens the survival of institutions. Not only the fates of thousands of students hang in balance, even the Vice Chancellors and Registrars of Universities feel insecure in view of the various 'leakages' of papers and corruption in valuation. Quack treatment was administered quite often, thus resulting in a further deterioration. Thanks to the West Wind : Fertile ideas from West conquer our wasteland, take us by storms and we adopt them blindly without bothering to examine their propriety in our own setting.

The 'objective' test tempted us as an absorbing passion. Charming arguments were paraded and we fell suppliantly at the feet of the dame objectivity. In the euphoria so developed, we ignored the following facts :

- Objective questions are suited best to classroom tests as a tool in the hands of the teacher. It 'fails' in an examination situation. The simple fact that 'tests' and 'examinations' differ considerably was ignored.
- These items require a team of well trained designers. The 'examiner' is a senior who frowns at the idea of undergoing rigorous training for setting question paper. He sets an 'objective' paper without bothering about reliability, validity of his items.
- Test-items must be 'validated' first and

then only administered. Examination procedure, because of the myth of 'confidential' around it, does not permit such kind of pre-testing the 'test' Paper leakages have also made such ideas highly unfit.

- Objective questions should be administered in certain ideal conditions (which are always non-existent) :
 - (a) Short duration (30-40 minutes)
 - (b) Honest supervision.

An examination running for three hours is the worst occasion for objective tests. As soon as the first hour is over, candidates rush to the "centres of advanced wisdom", i.e. toilets/urinals/bathrooms. 'Heaps' of wisdom lies 'treasured' here and there. They consult one another. The question paper is first smuggled out and within another half an hour master key is

'smuggled' in. The entire hall is now beaming with joy. Some 'signals' are devised, messages conveyed all over the room. The scores so obtained would be terribly Himalayan !

Guessing also helps the students to manage a respectable score. Since negative marking is not permitted, the score so obtained in one objective question alone enables them to pass the examination. They draw an absolute blank in all other questions and yet survive the test. In a language paper, objective questions on reading comprehension (carrying 20 marks) yielded an average score of 16-20. However, the questions on grammar/composition (carrying 30 marks) could yield on by 4-6. We can easily draw inferences

- (a) the paper was defective
- (b) the answers were manipulated through unfair means
- (c) sheer guess (no minus marking) helped them to swim across.

Language teachers have been complaining over the past years that this 'success' due to objective questions is counter-productive

- (a) It serves as a kind of negative 'motivation' towards language skills such as composition
- (b) It encourages gambling rather than reasoning

As a result, skills in composition remain neglected. Students need some one else to help them write a three-line application. If essay type questions had encouraged rote learning or mass copying; objectivity has also taken its own toll of victims.

This writer had the occasion to examine the scripts of a paper on Linguistics (that too on

'grammar'). The scores were as high as 90-95%. The performance is superb. The teacher deserves a pat on his back. The facts are deceptive. An item analysis revealed -

- (a) Repetition of the 'age old' questions over the years
- (b) Nature of questions itself made all deductions impossible. In a question carrying one mark, 5-6 relevant details are asked. The students guess 4 correct and 2 incorrect responses. Since marks cannot be awarded in fraction, you have to award them full one mark in spite of mistakes. If there are ten such questions, the score would be 10, though there might be 15-20 mistakes for which no deduction was possible.

Objective papers have proved to be a very costly affair from the administrative point of view. It has increased the cost of printing question papers enormously. The traditional paper used to cover 2-3 pages of printed matter. Now, the new one takes 8-10. The cost of composing, printing and additional stationery so required has made many universities bankrupt.

An objection may be raised that if UPSC and other examining bodies have been successfully exploiting the objective items, what is wrong in using them at the university level. The answers are not difficult to find :

- (i) Time for tests is relatively short. Scripts are collected within half an hour.
- (ii) The deterrent of negative marking checks blind guess.
- (iii) In competitive examination the spirit of co-operation among candidates is out of question. While in a routine examination,

such a fellow feeling is not going to cost them a chance of selection. No risk involved hence students are extremely cooperative.

- (iv) In competitive examination students do not go out of hall so frequently as they do during a university examination. This minimised malpractices.
- (v) In some cases different candidates get different scripts (questions in different order). None dares to seek assistance of the other.

What can be the solution ? Here are a few

suggestions .

- (a) Ensuring vigilant and close invigilation.
- (b) Collecting the objective answer sheet within half an hour.
- (c) Introducing negative marking for wrong guesses
- (d) Reducing weightage to objective questions (not more than 10%).
- (e) Intensive training in paper setting
- (f) Selecting items from question banks developed by the UGC/AIU.

Children's Habit of Reading Newspapers

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The functions of the mass media have been described primarily to inform, to educate and to entertain. The first and foremost duty of them is to inform the society about the various developments in our surroundings. This job has been performed by various means and systems through the ages. But, the landmark achievement was the perfection of printing art in the middle of the 15th century which heralded a new era in the diffusion of knowledge. The political awakening assisted with new means of spreading knowledge marked a new era in the history of mankind.

Today, the mass media flood the society with information providing ample opportunities to acquire new knowledge. A student today is served with latest information in various fields transmitted by the media. The technological advances in the areas of computers, fibre optics, laser and satellites have brought revolutionary changes in the field of mass communication. This information explosion has influenced the learning process to a great extent.

The education process by mass media is characterized by disconnected, scattered information with more emphasis on entertainment, news and presentation of view-points whereas in education, knowledge forms a coherent ordered system endowed with meaning.

Newspapers strive to provide the readers

with latest happenings besides explaining and interpreting their implications on them. Thus, a true newspaper functions as a trustee of community interest and welfare. Of course, news is no more the monopoly of newspapers. With several bulletins over radio and television, the newspapers have to look for something different that is already reported. More investigations, interpretations and educative items and the areas which didn't merit much attention hitherto are now getting more priority in the print medium. Thus, more and more items which intend to educate and enlighten the readers are being published.

Newspaper reading would help the students to know their surroundings better and assist them in understanding various subjects connected to their studies. They would function as a catalyst to kindle more and more interest and curiosity to enable them to acquire more knowledge.

The secondary school period is one of the most crucial phases in a student's life. Endowed with curiosity, interest and urge to learn, this period marks a turning point. A sincere student would find ample educative reading materials in newspapers, which would enrich his knowledge, helping him to fare better at studies. This would equally apply to the teachers who are expected to update their subject of teaching to help the students in learning process. And newspapers are the best means to acquire latest knowledge in detail.

Keeping the above factors in mind, a study was taken up to find out how the contents of the newspapers were used by the students and to what extent the teachers encourage students to read newspapers. The following were the main objectives of this study to :

- Find out the newspaper reading habits of High School students of Hubli-Dharwad.
- Examine their newspaper reading patterns and subjects of interest.
- Ascertain how newspapers help them in their studies.
- Examine the utility aspects of newspapers by students.
- Find out to what extent teachers encourage them to read newspapers and used examples from them in classes, and
- Know their opinions about the newspapers in general

The data was collected through a questionnaire from the students who were selected on a random basis. The data revealed that majority of the students, 73.17 per cent, read newspapers at home and very few, 17.07 per cent at school and rest of them at their neighbour's houses. It indicates that newspapers reading habit has been very

high and the reason that very few read at school could be because of time factor and the inadequate reading room facilities in schools.

As for as the time spent on reading newspaper, 59.75 per cent of the students said they would spend between 10 to 20 minutes, 32.92 per cent of students about 20 - 30 minutes and rest of them would spend more than 30 minutes. Although, the respondents are chosen from both English and Kannada medium schools, the study shows that majority of the students read Kannada newspapers. The two most popular newspapers are Samyukta Karnataka (48.78) and Prajavani (31.70). Only 21.09 per cent of them said that they read English newspaper, the Deccan Herald. The other English dailies are read by less than 10 per cent of them. The readers of Prajavani spend more time than the readers of Samyukta Karnataka on reading their newspaper.

The study reveals that even though teachers have not specifically recommended the students to read newspapers, but they encourage indirectly. 68.35 per cent of the students have acknowledged this fact. 35.36 per cent of students have said that their teachers would tell them to read only some times.

A good number of students, i.e. 42.68 per cent of them have said that their teachers give examples from newspapers on current topics. When they were asked to recall few such instances, they mentioned about recent air crash at Bangalore, drug addiction, Kashmir problem and recent general election analysis. About 36 per cent of the students have said that only some times their teachers had given examples from newspapers.

The study confirms that majority of the teachers quote examples from newspapers. It is

important to note here that 93.1 per cent of the students feel that newspapers should be read by the students. This indicates the urge among students and recognises their immense usefulness as a source of information.

When they were specifically asked to what extent newspapers help them to understand their subjects better, 56.09 per cent of them said that they help them to understand their subjects better and 35.36 per cent of them said they would help only to some extent. The fact that newspapers contribute to enrich their knowledge is accepted by the students. 58.49 per cent of the boys have said that newspapers help them to understand their subjects better to a great extent whereas 62.09 per cent of girls have said only to some extent. It can be inferred that male students read newspaper contents more seriously than that of the girls. 54.08 per cent of the students have said that newspapers help them to improve their language and enrich their vocabulary.

✓ Sports items are more regularly read items followed by comics, cinema, news, science articles, serials among boys whereas cinema items are more popular among girls followed by quiz/puzzles, comics, news and sports. Sports items are least read among girls. If parents and teachers guide and encourage the students to read editorials, articles and other descriptive items regularly and more seriously, students would be benefited immensely.

The least read items among boys are editorials, features, astrology, business, advertisements, humorous items and letters whereas among girls, editorials, advertisements, letters, business items and astrology are the least read items. It is very interesting to know that more or less boys and girls have similar likes and dislikes with regard to the topics of interest except sports items.

As for preserving the articles for further use, boys pay more attention to this and keep the cuttings compared to girls. 41.50 per cent of boys have said that they have the clippings of the articles for further use. Nevertheless, both boys and girls read newspapers with equal interests.

Both boys and girls said that they do not take down points from newspapers while reading them. The students have suggested that there should be a separate column for them. Advertisements should be less and newspapers should become cheap and language should be simple to follow. They would like to have more science, sports and quiz items. 50 per cent of them said that newspapers are very useful to know about recent happenings and they are the mirrors of the public opinion. A world without newspaper is like a class without teachers. This is indeed a salute to the Fourth Estate!

Children Activated Literacy Programme

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It is known now that most of the illiterates are in villages. There is also a dearth of volunteers in villages. As such massive literacy could be achieved only through involvement of every educated available and the enrolled children of village schools are the best suited though they are not the best educated. Hence their involvement in this task is but necessary. Hence an idea of educating masses with the help of school children gains consideration and this we could call Children Activated Literacy Programme (CALP).

CALP incorporates introducing of a new educational culture among village school children of helping their illiterate parents and friends learn voluntarily the literacy material in a more informal way. CALP is based on the twin theories that teaching consolidates what is already learned; teaching is an active process of learning.

This paper covers the aspects of :

- Illiterates
- Volunteers
- Children's participation
- Role of teacher and school
- Literacy days at schools and
- On what is needed.

The results of the study could be obvious. They may not be rapid. Their pace is slow, gradual and continuous but sure results could be got

over a period of time. We need not have any doubts or apprehensions over the CALP being successful. We have to our credit the experience of having successfully utilised the services of V passed (Lower grade) and VIII passed (Higher grade) teachers appointed in 1950's who are still continuing in service in our primary schools. Could we say their contribution to education has been unsatisfactory ? Similarly, we could utilise the latent teaching talents of the present day enrolled children of our villages.

The present-day illiterates are not ideal members of community. They are active at house or at work. They can help parents in farming and household work. Some times they are employed as part or full times either as house-maids or in local workshops of factories. They work in different fields of every day life, in different timings. Their holidays differ. Though they belong to a particular class of the village, they can not afford to attend an adult education centre or a non-

formal school as a group. They may be interested in literacy. These adult education centres, non formal centres, literacy class by college students under "Each one Teach one" Programme, though started with high level planning, vast administrative buildup, well planned and printed books, etc., was not successful just because of the very nature of variance in the age group, available time and necessities of the illiterate masses.

Volunteers as Teachers

The present day literacy programme requires a large number of volunteers to work as teachers, preraks etc. Cooperation for canvassing, planning and implementation of massive literacy programme, is being sought by the Government. Many political parties are advancing their men and machinery through their front organisations and cultural forums.

Are they-a political ? Any volunteer from a cultural organisation or forum of a political party is not free from the influence of ideals and policies and direction of the political party whatever secularism its constitution may claim. Such a volunteer cannot be expected to be apolitical and secular.

Since a volunteer is likely to have a considerable period of association with the learner in course of his service during literacy programme, he can positively exploit the learner politically, ideologically to the desired extent expected by the political party or forum to which he belongs.

Could they be successful ? Our Government tried schemes of voluntary teachers working on honorariums in adult education programmes and non-formal centres. Can we claim they were successful ? Our experience has shown that they were not. Either the volunteers were not well

trained or the society has not accepted them fully. With the number of illiterates being very high, i.e. 65 to 70% of the population, the number of volunteers required are by any estimate is 10% of the number of illiterates to be educated. This figure may vary between 5% to 8% of the population. Some villages do not have that many literates least say SSC passed trainable volunteers. Those who have passed SSC and above have left the villages or shuttle to the nearby town for studies or for employment. Even those who are living in the villages are otherwise occupied. As such, we do not have even a minimum number of real volunteers in villages.

Just because previous "voluntary" schemes failed and we fear political exploitation, can we reject the idea of using volunteers ? Is there a way to try in lieu of ? Can we look for any parallel approach for this massive literacy programme?

In the light of the points discussed above, it is to be given proper thought as to whether the leisure time of school-going children can be utilised in this great task of educating masses.

Children are closer to illiterates. We can observe that the parents of most of the enrolled school children in villages are normally illiterates. Their siblings drop outs, their friends and relatives toil for livelihood with no thinking on education.

Most of the educable illiterates are in villages. They are either parents or kith and kin of enrolled children in villages.

Pupils have access to illiterates. Can you imagine who can have better access and continuous interest in the education programme for illiterates ? Not the part time sevak who opens for 3

hours a day when villagers are at work or otherwise busy looking after or milking cows. Not certainly the programme officer of adult education department on a fortnightly visit. No body but themselves they need help.

Those who can best implement the massive literacy programme are nobody but school-going children of that village. They are close and easily accessible to the illiterate whenever time permits. They are the sons and daughters of illiterates. They were once friends and neighbours of dropout children, illiterates child labours.

Can children teach adults ? Yes and No. A pupil cannot be expected to teach in the way the teacher teaches. But, he can impart literacy to an adult by his mere proximity to the needed. He can teach alphabet, numbers, words to an illiterate and can also teach what he was taught at school once the illiterate becomes literate. A pupil's approach in teaching an adult is more informal, homely and without strange feelings on the part of learner.

Is training necessary for pupils in this task? No. Not at all. The children need not have any classes to be able to teach their friends and parents. All they need is a day-to-day direction which can be made available through his teacher, according to the need of illiterate and his occupation.

Basic tools of learning such as pocket note books, pencils, pictorial reading material only need to be given to illiterates through the teachers and pupils.

Moreover the concept of "Literacy Day" envisaged in this programme helps the pupils and parent as well.

Pupils can gain too. Teaching improves and

consolidates knowledge. In the process of teaching the illiterates the pupil tend to concentrate on learning more in order to be able to teach successfully and gain for themselves too. Their every day learning programme gets accelerated while the illiterates begin to become literates.

Children love teaching. Children love to teach either they be in 1st Class or X Class once such culture is introduced. If children are enrolled as volunteers, they love it for the satisfaction it gives. Illiterates like the system because they just cannot ignore and make their own child or friend unhappy. This helps lot of flexibility in utilising leisure time for literacy.

In conventional, formal classrooms we have teacher pupil ratio varying between 1 : 20 to 1 : 60. In the children activated literacy programme, the ratio between the pupil and illiterates never falls below 1:2 and never exceeds 1:5. At any given hour of day the number of illiterates interacting with pupil for literacy remains 1 or 2. Such ratio is certain to yield positive results once the teaching culture is introduced among the school children.

Mutual continuous evaluation is possible. In the children activated literacy programme, there is scope for mutual evaluation by the pupil and illiterate. Such evaluation is highly informal, but sure results are expected over a period of time. Constant, continuous monitoring of educational programme is achievable.

Does this programme hinder the playtime of children and affect them psychologically ? No. Not at all. Because the children need not sacrifice their play time. They just help their parents and friends when they sit to do homework at house or at the community hall. Since the adult literacy involves smaller steps and stages of learning the

child can easily help the parents in their voluntary learning activities just the way an educated parent helps his child. They need not do away with their play time and pleasures for this programme.

Does this programme affect the learning of children ? Actually CALP promotes their learning for the reason that teaching consolidates what is already learnt. Since the parents sit with the child on account of personal interest in learning the culture of sitting for night study becomes a regular habit similar to that of supervised study at hostels.

Children are secular and apolitical. School children are free from political ideologies or doctrines. They follow their teacher, read the textbooks and are concerned only about their education. The children need be rewarded. Their effort appears to be small but results are expandable. Any reward to the child automatically accelerates the literacy programme. The child evinces more interest if he is rewarded. His classmates follow suit. Hence, expansion of literacy programme becomes real. Fruitful results follow. Since the rewards are to be in the form of stationery and books it helps their own retention in schools.

Any reward given to children is to be of some cash value and educational value. Considering the fact that dropouts in elementary schools are the result of parental disability to afford text books and stationery material, reward of stationery retains them in schools. Such books which can evince more interest in pupils hobbies, art, general knowledge and stories can be given as a reward. Thus, the pupils build their own library. They can circulate such books among the illiterates turned literates and help avoid of losing knowledge on the part of literates.

Similarly the achievement of children as volunteers can be assessed according to number of illiterates made literates and certificates can be given to be treasured by children

Children's Involvement

There need not be any apprehension about the child being able to pass on his knowledge to his parent or friend. Any children from Class I to Class X can be of use. Due to age consideration children of Class I and Class II and due to examination orientedness Class VII and Class X children cannot be initiated into children activated literacy programme. Pupils of hostels can interact with illiterate parents and friends only during term holidays.

Hence, pupils of Class II, IV, V, VI, VIII and IX who are living with parents in villages can be involved in this process successfully.

The Role of Teacher

The teacher in the village is the only and well educated man in most of the villages. Since the school children are the expected voluntary educators in the proposed CALP the teachers of students involved have an easy but important role to play.

Identifying active children : The teacher can identify active children and encourage them to be the volunteers. He arouses their enthusiasm. He kindles the latent talents and imbibe new culture of educating others.

Identifying the children of illiterate parents . The core of illiterates is part of parents and friends of enrolled children. Such children are to be identified so that through them the parents can be involved in CALP.

Inculcation of CALP culture among children and parents : An active child is always a pride possession of a parent. An educationally active child is still more talked about and loved by the parents as well as by the friends and relatives.

If such children are chosen for literacy programme and sufficient materials (books and stationery) are provided little effort is needed to convince the parents to become literates. The parents, the affectionate admirers of their children's knowledge will readily accept to become the pupil of their children. No task of outside convincing can be as forceful and as continuous.

Other tasks of canvassing and enrollment in literacy programme subdue over a period of time but the continuous presence of an industrious student at home continues the process of literacy to the level of educated well being of community.

Enrollment of illiterates : Illiterate parents, friends of active children are to be enrolled and attached to a child, by maintaining a Register. This helps monitoring, evaluation and award of certificates.

Active participation of school is also necessary for CALP. The teacher may declare and conduct one working day every week as "Literacy Day". The teachers can identify the individual differences, tastes and preferences, talents of adult learners and write for required books and stationery from Government.

The school building or community building can be used as a meeting place for adult learners, children and teachers of the village. Such meetings help develop better parental relationship for teacher, comparison and exchange of knowledge

by adult learners, a very informal way. They can listen to a educational broadcast over radio or watch TV.

Evaluation of literacy is different from evaluation of formal teaching. The teachers well acquainted with evaluation process find the task of periodical and comprehensive evaluation of literacy programme easy and well defined. They can award literacy level certificates to the illiterates made as literates.

What is Needed ?

The CALP calls for students and illiterates jointly interacting for educational purpose. They need a place to sit together and learn. The illiterates of villages do not have electrification for their houses. Their houses are normally one-room huts, without any veranda or sitout. Even the school-going children find it difficult to do homework at house.

Hence at least one place, well-lit with electric lights is necessary for school children and adult learners. School building is an ideal place for electrification. Wherever school building is not existing, either a community hall, cyclone shelter, anganwadi school or a temple can be electrified on a pilot basis.

Literacy day is to be a holiday and also to be declared dry. Literacy day is to be declared a compulsory agricultural holiday for effective participation of illiterates in CALP. Similarly, considering the ill-effects of liquor over human psychology and learning, prohibition is to be introduced on this literacy day. This may help proper attendance, orderly behaviour and sincere learning attitudes among illiterates associated with CALP.

Household Characteristics and Educational Wastage

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To facilitate an understanding of the varying nature of educational demand at the level of the family resulting in 'none' to 'all' child/children completing primary education, the present study was undertaken with the objective to investigate the effect of socio-economic factors in rural areas that lead to varying nature of educational demand at the level of the household. The factors investigated included caste, size of land holding (as it is difficult to determine income), parental education, family type and size.

On the basis of the schooling profile of children in the primary age group, three educational categories were formulated. These were as follows

- Households where all primary aged child/children were in school,
- Households with no primary aged child/children in school;
- Households with a few primary aged child/children in school.

The above categories reflect the educational

participation behaviour of the households

Results and Discussion

In Dhiranwas village, Hisar district, Haryana, out of 172 households in the village, 108 households had children in the age group 6 to 11 years. These households comprised 62.79 percent of the households in the village. The distribution of primary school aged children in the three educational categories is shown in

Table I

TABLE I

Household distribution according to schooling profile of 6 - 11 years old in the village

Household category	No.	%
All children in school	47	43.51
Few children in school	33	30.56
No child/children in school	28	25.93
Total	108	100.00

It is noted that in 43.51 percent of the houses, all children attended school while in 30.56 and 25.93 percent of the households 'few' and 'no child/children' attended school. Subsequently, a high percentage of the households did not make full use of the village primary school.

Caste - The caste distribution of households in the village with primary aged children was as follows: Jat households (67.6%), artisan households (2.8%), Harijan households (27.8%) and outsiders (1.8%). The village was predominantly a Jat caste village. The caste distribution of these children in the three educational categories is presented in table 2. From the data in the table it is evident that wide disparity exists both within and among castes in relation to primary education of children. It was estimated that out of 43.51 percent of household with all children in school, 37.96, 3.70, 0.93 and 0.93 percent of the children were drawn from Jat, Harijan, Artisan and outsiders households respectively. Consequently, as a caste group, demand for primary education was highest among the Jats.

In the schooling category of 'few children' in school, 57.5, 33.3, 6, and 3.0 percent of the children belonged to Jat, Harijan, artisan and outsider households, respectively while in the category of 'No child/children' in school, 12.03 and 13.89

percent of the children were from Jat and Harijan caste, respectively.

The varied distribution pattern of households reflects a complex situation. However, as a caste group the Jats attached greatest significance to education of children. They expressed the view that education was becoming more essential, prestigious and fashionable with passage of time and on account of recent changes in agricultural practices educational skills are essential. Moreover, with rise in educational status of boys, the educated boys preferred marrying educated girls and this led to greater emphasis on education of girls. The discussion with the parents of Harijan and artisan children revealed that their community remained fairly prejudiced towards education of girls for the reason that educated girls were not preferred much for marriage as they were regarded to be extrovert and parents had to pay higher dowry as they had to search educated boys for educated girls while such boys were limited in their community. Moreover, as job opportunities after primary education were negligible and parents preferred early marriage of young girls, they did not attach much significance to completion of primary education. However, the outsider households attached greater significance to education of children as they mentioned that in the absence of agricultural land, their children would have to depend upon educational qualifications to procure jobs in the future.

TABLE 2

Household schooling profile of 6 - 11 years old according to caste

House hold Caste Category	Jats		Artisans		Harijans		Outsiders		Total	
	No	%	No	%	No.	%	No.	%	No.	%
All children in school	41	37.96	1	0.93	4	3.70	1	0.93	47	43.51
Few children in school	19	17.59	2	1.85	11	10.19	1	0.93	33	30.56
No child/children in school	13	12.03	-	-	15	13.89	-	-	28	25.93
Total	73	67.59	3	2.78	30	27.78	2	1.85	108	100.00

TABLE 3

The household schooling profile of children 6 to 11 years according to size of land holding and caste

	Jats			Artisans			Harijans			Outsiders			Total
	No.	Below 5.1 land 5.0 acres to 10 & above	10.1 acres & above	No.	Below 5.1 land 5.0 acres to 10 & above	10.1 acres & above	No.	Below 5.1 land 5.0 acres to 10 & above	10.1 acres & above	No.	Below 5.1 land 5.0 acres to 10 & above	10.1 acres & above	
land hold- Schooling category of house holds													
All children in No. school	-	15	18	8	-	1	-	3	1	-	1	-	47
%	-	13.88	16.66	7.41	-	0.93	-	2.77	0.93	-	0.93	-	43.51
Few children in No school	-	4	8	7	1	-	1	10	1	-	1	-	33
%	-	3.70	7.40	6.48	0.93	-	0.93	9.26	0.93	-	0.93	-	30.56
No child/children in school No.	-	3	6	4	-	-	-	14	1	-	-	-	28
%	-	2.78	5.56	3.70	-	-	-	12.96	0.93	-	-	-	25.93
	-	20.36	29.62	17.59	0.93	0.93	0.93	24.99	2.79	-	1.86	-	100.00

Size of Land Holding

Dependence of households on agriculture as a major source of income was high in the village. The Jats possessed most of the agricultural land while the range varied between 1 acre to 75 acres. The artisans households possessed small size of holdings while majority of the Harijans and the outsiders did not possess any land. Most Harijan parents worked as labourers in the village on the farms of the Jat farmers.

The distribution of children in the three educational groups on the basis of four groups of land holdings, namely, no land, below 5 acres, 5 to 10 acres and above 10 acres, is presented in table 3. Data in table 3 reveal that there was an increase in proportion of households with 'all children' in school as one moves up the size of land holding in the first three categories from No land category

upward followed by a decrease in the category of big farmers. Discussion with big farmers revealed that if their boys did not complete primary education, they had enough land to employ them and in case of less educated girls, they would pay higher dowry to get an educated bridegroom.

Parental Education

The educational status of mothers and fathers in the three educational categories is presented in table 4. It was found that the educational level of parents, especially mothers was extremely low and this reflects a historical bias towards education of male members. Further, a linear relationship was noticed between parental education and education of children. Educated parents had a greater tendency to educate their own children. Thus, there is a higher possibility of a child of educated parents to receive education.

TABLE 4
Parental educational profile and household educational category

Parental Educational level (%)	Primary		Middle		High		College		Total	
	M*	F**	M	F	M	F	M	F	M	F
All children in school	3.70	15.74	—	7.41	—	5.55	—	1.85	3.70	30.55
Few children in school	—	11.11	—	2.78	—	—	—	—	—	13.89
No child/children in school	—	6.48	—	1.85	—	—	—	—	—	8.33
Total	3.70	33.33	—	12.04	—	5.55	—	1.85	3.70	52.77

*M = Mother

**F = Father

Family Size

These factors determine the family's workload, age composition of family and distribution of per capita income. Furthermore, possibility of parents being major educational decision-makers is higher in nuclear

families while in joint families there is greater likelihood of influence from old age members who play an important role in the process of educational decision making and generally attach lesser importance to educational skills.

TABLE 5

Family type and size and household educational category

Family type and size	Family type				Family size					
	Joint		Nuclear		Upto		6 to 10		11 +	
	No.	%	No.	%	No.	%	No.	%	No.	%
All children in school	16	34	31	66	7	15	22	47	18	38
Few children in school	9	27	24	73	6	18	19	58	8	24
No child/children in school	7	25	21	75	7	25	17	61	4	14

Data presented in table 6 reveal that a large majority of the families in the village were of nuclear type. Comparatively higher percentage of joint family households sent 'all children' to school. This may be on account of the fact that the opportunity cost of sending children to school is less in joint compared to nuclear families. On the basis of family size, it was found that maximum percentage of children in all the three educational categories belonged to family size 6 to 10 members. Hence, the effect of family size does not stand out in any distinct manner.

Conclusion

Among the socio-economic factors, caste is the most significant determinant of educational profile of children. Education was attached a comparatively higher social value among the higher caste households while majority of the

parents belonging to Harijan caste remained somewhat prejudiced against education of girls and placed higher value on traditional rather than educational skills. The educational inequality between boys and girls was fairly high to the favour of education of boys as they were regarded as a major source of family's income and security while girls were seen as another man's property and there was greater emphasis on imparting traditional rather than educational skills. It is concluded that caste is an important factor that determines socio-economic status and influences, attitudes and values.

If education is to function more effectively as a mechanism for equality, integration and socio-economic mobility especially among the lower caste, it is necessary to generate greater usefulness of educational skills, provide attractive schooling facilities and greater job avenues.

Female Teacher's Attitude on Job Satisfaction

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It is generally believed that professional attitude of female teachers significantly affects their job satisfaction. To prove this contention, a study was conducted by the author with a sample of 284 female working in Secondary schools of Varanasi who were drawn on the technique of incidental and purposive sampling.

To measure the job satisfaction of women working in teaching profession, a valid and reliable tool was needed. In the absence of availability of such standardized tools, it was decided to develop a suitable inventory which could measure the job satisfaction of women working in different professions. Reliability of the tool was calculated and through test-retest method it was found to be 0.74 through split half 0.89 and through K - R formula 20 it came out to be 0.85. Validity was determined through concurrent and criteria related validity method. Teachers' professional attitude was measured through Dr. S.P Ahluwalia's (1974), teacher attitude inventory.

Analysis and Interpretation

Data on teachers' professional attitude of 284 women working in teaching profession were tabulated and arranged on the basis of P75 and P25, under three categories, viz., teachers having favourable attitude, teachers having moderately favourable attitude and teachers having just favourable attitude. Mean of the female teachers' attitude score towards their profession was found to be 240.31 which was significantly above the mid point (180) of the scale of TAI (Ahluwalia, 1974). Neutral attitude is exhibited when the score of subject falls around 180 on TAI. There-

TABLE 1

Classification of female teachers on the basis of P75 and P25 – values on teachers attitude inventory scores and corresponding means of their job satisfaction scores

Groups	Number of Women Teachers	Range of Attitude Scores	Mean of Job Satisfaction Scores
Highly favourable attitude	70	260 - 329	36.90
Moderately favourable attitude	144	221 - 259	34.59
Neutral attitude	70	164 - 220	33.25

tofe, when attitude scores were segregated into three categories, the categories contained highly favourable, moderately favourable and neutral attitude of female teachers (median for female teachers of U P is at 211 as given in the manual of TAI). Table 1 gives the number of respondents in each category, their range of score on attitude scale and corresponding mean values on their job satisfaction scores

A perusal of Table 1 reveals that there is an increasing trend of job satisfaction as teachers'

attitudes become more and more favourable. To test the significance of this trend or variation, ANOVA was carried out and results related to that ANOVA is summarized in Table 2.

An observation of Table 2 reveals that F - ratio (258.93) is significant beyond 0.01 level of significance. The value of F - ratio needed to be only 4.71 to become significant at 0.01 level with 2/281 degrees of freedom. Hence, the hypothesis (H₀) that professional attitudes of teachers do not significantly affect their job satisfaction is straight away rejected.

TABLE 2

Summary of ANOVA for the effect of women teachers' attitude on job satisfaction

Sources of Variation	Sum of square	Degrees of Freedom	Mean sum of square	F	P
Among Means	4313.75	2	2156.88	258.93	0.01
Within Groups	2341.18	281	8.33		

Research hypothesis in this regard clearly states that attitude of teachers towards profession affects their job satisfaction. Result of this study is clearly in line with research hypothesis arrived at through repeated studies of the same nature. The finding of this section is in conformity with the findings of Blum (1952), Sinha (1958), and Goyal (1981). They found that attitude of the respondents was a major factor that determined their job satisfaction. Ghosh and Ghorpade (1980) expressed that, "the attitudes (in the form of learned disposition) make individual to react in favourable, unfavourable or in different manner".

Implementations of Study

The finding of the present study reveals that those women teachers who have developed an unfavourable attitude after experiencing considerable frustration and disillusionment with their job may gradually come to acquire dissatisfaction with their job. Our women's education, then, is to be streamlined in such a way that when girl students take up specialized courses for a particular profession, the education there should become a catalytic agent for fostering favourable attitude towards that profession. Consequently, future job satisfaction of them may bring more good to the society with more qualitative production in that particular profession.

Tribal Teacher Development Programme

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One of the major causes of education making little progress among the tribals of India is the lack of suitable training for the teachers of tribal learners. The conventional teacher training can hardly be of any help to them as their situation, their learners and the problems they face are quite different from that of the non-tribal schools. Further, as almost all the teachers (about 95%) who teach tribal learners, are high-caste non-tribals, they are found to share the negative stereotypes of tribals with their dominant culture group people. They fail to understand their tribal students and their problems in learning because of the great difference between tribal and non-tribal cultures, and even many wish their students to be assimilated into the non-tribal culture, which they consider the only way left for their socio-economic upward mobility.

Stated below are some of the findings from a survey conducted among teachers teaching tribal students (Kundu, 1980 & 1985).

1. Eight of the 16 negative stereotypes of tribals served to the teachers in a checklist were attested by 50% of them. Some of the stereotypes they supported include :

- i. Tribals lack courtesy.
- ii The culture of the tribals is inferior.
- iii The tribal languages are underdeveloped.
- iv. Tribals are quite satisfied with what they have and do not want to improve their lot.

2. The majority of teachers are against the use of tribal languages in education and are found to

discourage their tribal students from using their languages within the school campuses

3. The teachers fail to take into account the tribal learners' culture specific styles of learning and fail to realize some of their problems in comprehending the ideas and concepts foreign to their culture used in the textbooks based on non-tribal and urban cultures.

As the teachers with these attitudes can be of little help to their tribal learners the training programme for them should attempt to bring about changes in their attitudes and equip them with knowledge and skills to understand their tribal students and their problems in learning. But, the existing teacher training programmes for them do not take into account these facts. In spite

of the fact that some states have schools mainly for tribal students and separate training institutes to train teachers of tribal students, the existing training courses for such teachers are in no way different from other general training courses. Only in addition to these training, some of the teachers teaching in tribal schools are given short courses on tribal life and culture, often along with other administrative staff who are to work in tribal areas. An analysis of these short courses shows that their only objective is to pass on some basic facts of tribal life and culture - how they live, their food habits, child rearing practices, etc. This hardly helps in changing the attitudes of the teachers or in understanding a culture which is very different from that of their own. Instead, this further accentuates their already existing ethnocentrism and negative attitudes to tribals. For examples, merely passing on the fact that tribals enjoy themselves through songs and dance does not help the teachers' attitude that tribals are quite satisfied with what they have and do not want to improve their lot. They should rather have been told how some cultures foster mental health and some cause mental disease and how the tribal's involvement with pleasure activities accounts for the absence of psychosis and neurosis among tribals.

Thus, there is a great need for special training for the teachers of tribal learners. In fact, the right word here is not 'training' but 'teacher development' as the special training for them will attempt to bring about a change in the total personality structure of the teachers. Any teacher development programme for them, therefore, should have the following course contents.

Special Course Contents

Any teacher training, more appropriately, teacher development programme for the teachers

of tribal learners should include the following two major course contents.

- | | |
|-----------|----------------------------------------------|
| Course-I | General orientation on related disciplines |
| Course-II | Orientation on specific subject of teaching. |

General Orientation on Related Disciplines

Orientation on related discipline should precede orientation on specified subjects of teaching and should aim at achieving the following objectives :

1. Acquainting the trainees with concepts and developments in such related foundation disciplines as cultural anthropology, socio-psychology, socio-linguistics, education for the disadvantaged etc
2. Developing in them self-awareness, cultural awareness and intercultural awareness.
3. Making them conscious of their own tendency to stereotype tribals and their tribal learners
4. Removing/unsettling some of their misconceptions such as —
 - a. Culture and race are related
 - b. Some cultures are superior and some inferior
 - c. Tribal languages and cultures are inferior to non-tribal languages and cultures
 - d. Written cultures are superior to oral cultures.
5. Helping them identify and diagnose some of the cross-cultural conflicts arising in the classroom.

Course Contents

Stated below is a brief outline of the course content of the general orientation on related disciplines

1. Cultural anthropology : Culture and its influence, different cultures and cultural differences (individual vs. group oriented cultures, oral vs. written cultures and cultural differences with regard to use of time, space and etiquettes).

Results of culture - contact (dominant and minority cultures in contact)

Borrowing, acculturation, cultural loss, deculturation.

Cross-cultural problems (dominant vs. minority cultures) causes and remedies

2. Social psychology : attitudes, prejudices, stereotypes
3. Tribal life and culture, positive aspects of tribal culture.
4. Education for the disadvantaged
5. Tribal education.

Depending on time and money available Course I can itself form a separate training programme to be imparted to all the teachers teaching tribal learners irrespective of the subjects they teach or else it can be clubbed together with course II orientation on respective subjects of teaching. Course I general orientation on related disciplines will not only help the teachers change their attitudes, it will also help them realize the appropriateness/inappropriateness of the existing method of teaching/learning in their respective subjects (to teach their tribal learners).

Specific Orientation

Orientation on specific subject of teaching should follow the orientation on related disciplines and should broadly aim at achieving the following two objectives :

- i. Improving the teachers' competence in the subject
- ii. Improving their skills in teaching the subject.

Depending on the subject the specific objectives will vary. Orientation on teaching of English, for example, a course designed (by the author) for the English Language Teaching Institute, Orissa can have the following specific objectives .

1. Improving the teachers skill in speaking, reading, and writing and the skills to develop such skills in their learners.
- ii Improving their study skills (using dictionary, making and taking notes) and to teach such skills to their learners.
- iii. Acquainting them with some of the basic principles of test and material preparation
- iv Acquainting them with some of the special ELT (English Language Teaching) methods suitable for their tribal learners.
- v. Helping them use radio and TV lessons in the classroom.
- vi. Helping them identify cultural biases (dominant non-tribal) in English textbooks and test materials.

Course Contents

Depending on the subject of training the course contents will vary. The course contents on English teaching for example, can include the following topics :

- i. Spoken English
- ii. Grammar
- iii. Writing
- iv. Reading
- v. Study skills
- vi. Testing and cultural biases in test materials
- vii. Material preparation and cultural biases in English textbooks
- viii. English by Radio and TV
- ix. Special ELT methods for tribal learners such as group methods, role-play, use of riddles and chain tales and riddle stories, language games and quizzes

Orientation on specific subject should stress the following three aspects :

1. Use of tribal culture as positive resources to teach the tribal learners. Tribal children, because of use of riddles, proverbs and conundrums in their culture, are very good in detecting the two levels of meanings — the literal and figurative— involved in such verbal strategems. The teachers, for example, can use such skills in their tribal learners as positive resources to teach them poems.
2. Special methods : Depending on tribal culture the methods of teaching/learning in their culture, some methods of teaching in the subject concerned can be more effective than others. Because of tribals' preoccupation with pleasure activities, for example, teaching through games, riddles and role-play can be more effective than other methods of teaching/learning.
3. Supplementing existing textbooks and test materials : So long as special textbooks are not written for tribal learners keeping in view tribal life and culture and their learning styles, there will

be need for adapting and supplementing the existing textbooks and test materials. Orientation on specific subject should, therefore, train the teachers how to adapt and supplement the existing textbooks and test materials for purposes of teaching their tribal learners.

When course I and course II form parts of a single training programme the ideal break up of components should be 40% (related discipline component) and 60% (specific subject of teaching component) And these two parts should not be treated as water-tight components. Rather one should complement and reinforce the other. The teaching of reading to tribal learners, for example, should take into account the oral culture of the tribals, their negative attitudes to reading and concentrate on special methods of teaching reading to tribal learners such as reading through riddles, chain-tales and riddle stories which go well with their culture.

Conclusion

The special training the outline of which is briefly described above will not produce desired results unless changes are made in the general administrative set up of the tribal schools. It is found that as most of these schools are located in hilly and rural areas and the teachers are from far off places they prefer to live alone away from their families. They are also not happy with the dual administrative set up of tribal schools — the Inspector of Schools and the District Welfare Officers. In most cases the teachers are found to be much more qualified than their bosses in the Welfare Department and there found to exist mutual doubt and distrust among them. Attempts should, therefore, be made to remove the dual administration and mutual distrust and to provide the teacher with special incentives to work in tribal localities.

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